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Sir J. F. W. Herschel Bart<sup>th</sup>

From the Royal Astronomical Society,





# ASTRONOMICAL OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, EDINBURGH.

BY

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## INTRODUCTION.

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THE Royal Observatory at Edinburgh is situate on the Calton Hill, in the north-eastern quarter of the city, in Latitude  $55^{\circ} 57' 23''.2$  North, and Longitude  $0^h 12^m 43^s.0$  of time, or  $3^{\circ} 10' 45''$  of space, West of the meridian of Greenwich. The upper surface of the square plinth of the base of the central column, bearing the Equatorial Telescope, is 349.16 feet above the mean level of the sea in the Frith of Forth at Leith.

The Observatory, and the principal instruments, viz. the Transit Instrument, Mural Circle, Equatorial Telescope, and Clock, are particularly described in the preceding Volumes.

The objects chiefly observed with the meridian Instruments during the year 1839 were the Sun, Moon, and Planets, the principal Stars for ascertaining the error and rate of the Clock and the position of the Instruments, Moon-Culminating Stars, Stars contained in the Catalogue of the Royal Astronomical Society, situate to the north of the parallel of  $20^{\circ}$  South Declination, and Stars of the sixth and greater magnitudes contained in GROOMBRIDGE'S Catalogue, and situate within  $5^{\circ}$  of the North Pole.

### *Observations made with the Transit Instrument.*

Nearly the whole of these observations have been made by the Assistant-Astronomer, ALEXANDER WALLACE, M.A. Those to which the mark † is annexed in the last column of the observations were made by myself.

For the determination of the personal equation subsisting between our different modes of observing, transits of Stars near the Equator were observed on several days during this year at Wires I and V by one of us, and at Wires II, III, and IV by the other. The observations are inserted among those made with the Transit Instrument; and it was found that in every instance his times of estimating transits were later than mine, the differences being as follows:—

March	18.....20 Virginis..... <sup>s</sup> 0.28	July	8.....A. S. C. 1956..... <sup>s</sup> 0.50
	21.....93 Leonis.....0.18		
	23.....33 Sextantis.....0.32	September	21.....69 Aquilæ.....0.62
	25.....ζ Hydræ.....0.28		70 Aquilæ.....0.57
	29.....55 Leonis.....0.25		1 Aquarii .....0.52
	30.....23 Sextantis.....0.20		3 Aquarii .....0.65
April	8.....10 Sextantis .....0.20	October	5.....A. S. C. 2602.....0.65
	10.....A. S. C. 1195.....0.42		A. S. C. 2607.....0.62
May	6.....79 Leonis.....0.63		19.....10 Ceti.....0.35
	7.....79 Leonis.....0.45		12 Ceti.....0.25
	9.....A. S. C. 1367.....0.20	December	24.....A. S. C. 315.....0.35
	10.....A. S. C. 1393.....0.50		λ Ceti.....0.48
	11.....A. S. C. 1432.....0.48		
	16.....A. S. C. 1614.....0.67		Mean of 25 observations, 0.42

Hence, to reduce the times of transit observed by him to those which would have been observed by me, 0<sup>s</sup>.42 is to be subtracted from the former; and the same quantity is to be added algebraically to the correction of the Clock obtained from his observations, to give the correction which would have been obtained from mine. This personal equation has not been applied in any instance, as care has always been taken not to mix the observations of one observer with those of the other, in determining the rate of the Clock, or the Right Ascension of an unknown object by comparison with the Right Ascensions of known Stars, except in the case of  $\alpha$  and  $\delta$  *Ursæ Minoris*, where the errors of observation are greater than the equation. Following this rule, the corrections of the Clock deduced from my observations are distinguished by the mark † annexed to them in the Table, pp. 76–79.

The Transit Instrument was occasionally reversed, as mentioned in the observations, and, between two consecutive reversings, the instrument was used in one position of the axis, which is indicated with respect to its illuminated end being east or west, in the Table of the Error of Collimation given below.

The intervals of the Wires reduced to the Equator were determined from 71 observations of transits of  $\alpha$  *Ursæ Minoris*, over all the Wires, made in the course of the year; and the distances of the Wires from their mean or middle point were found to be,

Wire I.....	+ 26.560	} Sidereal time;
II.....	+ 13.283	
III.....	+ 0.009	
IV.....	– 13.291	
V.....	– 26.559	

the Wires being numbered for observations above the Pole in that position of the instrument when the illuminated end of the axis is West. These numbers have been used in reducing the imperfect transits of this year.



In computing the reductions to the mean of the Wires of observations of Stars within  $5^\circ$  of the Pole, the rigorous formula,

$$\sin \text{reduction} = \sin \text{equatorial interval} \times \sec \text{Declination},$$

was employed. For other objects, the formula,

$$\text{reduction} = \text{equatorial interval} \times \sec \text{Declination}.$$

For the Sun and Planets, the motion in Right Ascension has been allowed for: in the case of the Moon, BESSEL's method in the *Tabulæ Regiomontanæ* has been adopted.

In the original manuscript observations, the minutes of the transits over all the Wires observed for Stars near the Pole, and over the last Wire observed for other bodies, and the hours of the column of Reduction to Mean of Wires, are entered, but they have been omitted in printing, to save space.

The column Correction of Instrument, contains the corrections of the observed transits, arising from the deviation of the instrument from the meridian. The column Correction of Clock observed, contains the corrections of the clock obtained from the observations of the standard Stars; and that entitled Correction of Clock interpolated, contains the corrections of the Clock interpolated from the mean corrections deduced from observations. The computation of these three columns will be explained presently. The sign +, prefixed to the correction of the Clock, denotes that the Clock is slow; the sign —, that it is fast.

The sum of the numbers in the columns, Reduction to Mean of Wires, Correction of Instrument, Correction of Clock interpolated, is the Apparent Right Ascension observed, given in the last column bearing that title.

The formula for correcting the observed transits for the deviation of the instrument from the meridian is

$$\text{Correction} = (a \sin \text{Zenith distance} + b \cos \text{Zenith distance} + c \pm 0^{\text{s}}.028 \cos \text{Zenith distance}) \sec \text{Declination} \quad (1)$$

$a$  denoting the eastern distance of the plane perpendicular to the axis of rotation from the meridian at the south horizon, or the azimuth of the instrument,  $b$ , the eastern distance of the same plane from the meridian at the zenith, or the inclination of the axis of rotation, positive when the west end is high, and  $c$ , the error of collimation of the mean of the Wires *minus*  $0^{\text{s}}.012$  for the diurnal aberration, positive when the line of collimation is east of the line perpendicular to the axis of rotation.  $a$ ,  $b$ , and  $c$  are expressed in time, and the Zenith distance is positive when the object is south of the Zenith. The quantity  $\pm 0^{\text{s}}.028$  is a correction applied to the error of collimation, and was deduced from the observations of the meridian marks, as explained in the Introduction to the preceding Volume,

pp. xxii-xxv, the upper sign being used in the western position of the illuminated end of the axis, and the lower sign in the eastern.

In practice, the following transformation of the preceding formula has been employed :

$$\text{Correction} = m + n \tan \text{Declination} + c \sec \text{Declination} \quad . \quad . \quad . \quad . \quad . \quad (2)$$

$m$  and  $n$  being related to the quantities  $a$  and  $b$  by these expressions

$$m = a \sin \text{Latitude} + (b \pm 0^{\circ}.028) \cos \text{Latitude} \quad . \quad . \quad . \quad . \quad . \quad (3)$$

$$n = -a \cos \text{Latitude} + (b \pm 0^{\circ}.028) \sin \text{Latitude} \quad . \quad . \quad . \quad . \quad . \quad (4)$$

The error of collimation of Wire III has been determined from the observations of the meridian marks in the reversed positions of the axis, in the manner explained in the Introduction to the preceding Volume, pp. ix-x. For the reversings of the instrument the error of collimation of Wire III was thus found to be

1839,	$s$ .	1839,	$s$ .
Jan. 7.....	-0.099	Oct. 14.....	-0.112
Feb. 9.....	-0.099	Nov. 11.....	-0.095
May 21.....	-0.132	Dec. 11.....	-0.097
June 24.....	-0.151		
July 29.....	-0.132	1840.	
Sept. 17.....	-0.122	Jan. 18.....	-0.094

the sign here given being that which belongs to the western position of the illuminated end of the axis.

The quantities adopted are

Jan. 1—March 15	- 0.101	Mean of 3 determinations of 1838, and those of January 7 and February 9.
March 15—April 16	- 0.116	Mean of preceding value, and that of May 21.
April 16—May 21	- 0.132	Value of May 21.
May 21—June 24	- 0.142	Mean of values at beginning and end of each period.
June 24—July 29	- 0.142	
July 29—Sept. 17	- 0.127	
Sept. 17—Oct. 14	- 0.117	
Oct. 14—Nov. 11	- 0.104	
Nov. 11—Dec. 11	- 0.096	
Dec. 11—Dec. 31	- 0.094	

To these quantities increased by 0.009 for the distance of Wire III from the mean of the Wires (the sign of the sum being changed in the eastern position of the illuminated end of the axis), there is applied -0.012 for the diurnal aberration, and there are obtained the following values of the error of collimation of the mean of the Wires to be employed in formula (2):

	Period.		$c$	Illuminated end of Axis.
Jan.	1—Jan.	7	+ 0.10.....	East
...	7—Feb.	9	- 0.12.....	West
Feb.	9—March	15	+ 0.10.....	East
March	15—April	16	- 0.14.....	West
April	16—May	21	+ 0.13.....	East
May	21—June	24	- 0.16.....	West
June	24—July	29	+ 0.14.....	East
July	29—Sept.	17	- 0.15.....	West
Sept.	17—Oct.	14	+ 0.11.....	East
Oct.	14—Nov.	11	- 0.12.....	West
Nov.	11—Dec.	11	+ 0.09.....	East
Dec.	11— ...	31	- 0.12.....	West

The values of  $n$  have been determined by comparing the observed transits of  $\alpha$  and  $\delta$  Ursæ Minoris at their culminations on different sides of the Pole, and, when these were not obtained, by comparing their observed transits and those of the principal Stars distant from the Pole. Let  $A$  and  $A'$  denote the Right Ascensions of two Stars, the first being near the Pole,  $D$  and  $D'$ , their Declinations (for the transits *sub polo*,  $A + 12^h$  and  $180^\circ - D$  being used), and  $T$ ,  $T'$ , the observed times of transit over the mean of the Wires, then ( $c$  denoting the error of collimation employed in the reductions taken from the preceding Table),

$$n = \frac{(A - A') - (T - T')}{\tan D - \tan D'} - c \frac{\sin \frac{1}{2}(D + D')}{\cos \frac{1}{2}(D - D')} \dots \dots \dots (5)$$

$T - T'$  being corrected for the rate of the Clock.

On those days, on which the Polar Stars were not observed, the values of  $n$  have been determined, by formula (4), from the observations of one or both of the meridian marks, if they were then observed. The azimuth of the Instrument  $a$ , which is required for the formula, is obtained from either of the following expressions (Introduction to Volume IV. p. ix.):

$$a = S + s - c = -0^s.77 + s - c \dots \dots \dots (6)$$

when the South mark has been observed;

$$a = -N - n + c = -0^s.57 - n + c \dots \dots \dots (7)$$

when the North mark has been observed;

$$a = \frac{1}{2}(S - N + s - n) = -0^s.67 + \frac{1}{2}(s - n) \dots \dots \dots (8)$$

when both marks have been observed;  $S$  denoting the eastern azimuth of the South mark  $= -0^s.77$ ,  $N$ , the eastern azimuth of the North mark  $= +0^s.57$ ,  $s$ , the observed eastern distance of Wire III from the South mark,  $n$  (in the above ex-



pressions), the observed eastern distance of the same Wire from the North mark ( $s$  and  $n$  being taken from the Table, pp. 68–69), and  $c$ , the adopted error of Collimation of Wire III before given. The values of  $b$ , also required for formula (2), are interpolated from the Table, p. 69.

The values of  $n$  so obtained are given in the Table, pp. 70–74.

The values of  $m$  have been determined from one of the following expressions :

$$m = n \cotan \text{ Latitude} + a \operatorname{cosec} \text{ Latitude} \quad . . . . . (9)$$

$$m = - n \tan \text{ Latitude} + b \sec \text{ Latitude} \quad . . . . . (10)$$

The former was employed on those days when the deviation from the Pole  $n$ , and azimuth  $a$ , were ascertained, being given in the Table, pp. 70–74, and obtained from the observations of the meridian marks, pp. 68–69 ; and the latter, on those days when  $n$  was ascertained, but not  $a$ ,  $b$  being interpolated from the Table, p. 69. In the first case,  $m$  is stated in the Table, pp. 74–76, to have been determined from  $a$  ; in the second, from  $b$ . Sometimes  $m$  has been determined from both expressions, and a mean of the results taken, in which case  $m$  is stated in the same Table to have been determined from  $a$  and  $b$ . On those days on which the meridian marks have been observed, but the value of  $n$  has not been ascertained from observations of the Polar Stars,  $m$  has been determined from the formula (3), and is stated in the Table to have been determined from  $a$  and  $b$ .

The values of  $m$ ,  $n$ , and  $c$  employed in computing the correction of the Instrument according to the formula (2), are contained in the Table, pp. 74–76, the times of the beginning and ending of each set of values being indicated by horizontal lines in the column Correction of Instrument. The asterisks sometimes annexed to the dates in the Table of the values of  $m$ ,  $n$ , and  $c$ , denote that on those days, there being no determinations of the values of  $n$  or  $a$ , means of the preceding and subsequent values of  $m$  and  $n$  have been taken and inserted in the Table.

The correction of the Instrument for the Moon has been ascertained by increasing the correction for a Star, having the same Declination as the apparent Declination of the Moon, in the proportion of the interval between the Star's transit over two Wires to the observed interval between the Moon's transit over the same Wires.

The value of  $b$  is found immediately from the Spirit-level. In the Introduction to the preceding Volume, pp. xi–xii, it has been shewn that the inclination of the axis changes gradually with the temperature of the season, and that it appears to be connected with the changes in the height of a Thermometer, which shews the temperature of the surface of the rock on which the Observatory is built. By the method which is there explained, and from the corresponding observations of the inclination of the axis  $b$ , and the temperature of the rock  $t$  there given, and the following continuation of them, viz. :

1841,	<i>t</i>	<i>b</i>
March 2	37.4	+0.130
24	47.0	+0.029
April 26	45.2	-0.001
May 26	50.7	-0.067
June 17	53.0	-0.047
Aug. 2	53.5	-0.072
27	58.0	-0.049
Sept. 20	56.8	-0.049

$x$  has been found = 0.0111 from all the observations, and  $\tau = 49^{\circ}.09$  from the observations of 1839. Consequently the values of  $b$  have been computed from the formula,

$$b = 0.0111 \times (49^{\circ}.09 - t)$$

for those days on which the Thermometer was observed but the Level not applied. The values of  $b$  are given in the Table Inclination of Axis, p. 69, under the title West end high; and in the last column it is indicated whether they have been determined by the Level or the Thermometer. For times between the dates there mentioned, the values of  $b$  are assumed to have varied as the time.

For computing the corrections of the Clock, and the values of  $n$ , the following Table of the Mean Right Ascensions of the principal Stars for January 1, 1839, was employed, derived from the observations at Greenwich, Cambridge, and Edinburgh in 1838.

STAR.	Mean Right Ascension, 1839.0.	Difference from Nautical Almanac.	Difference from Berlin Ephemeris.
$\alpha$ Andromedæ.....	<i>h. m. s.</i> 0 0 4.67	<i>s.</i> +0.02	<i>s.</i> +0.04
$\gamma$ Pegasi.....	0 4 57.11	-0.12	-0.07
$\beta$ Ceti.....	0 35 30.27	-0.07	.....
$\delta^1$ Ceti.....	1 15 58.61	-0.20	.....
$\alpha$ Arietis.....	1 58 6.66	+0.06	+0.02
$\gamma$ Ceti.....	2 34 57.82	-0.26	.....
$\alpha$ Ceti.....	2 53 52.16	-0.06	0.00
$\eta$ Tauri.....	3 37 55.51	+0.01	.....
$\gamma^1$ Eridani.....	3 50 31.18	-0.04	.....
$\alpha$ Tauri.....	4 26 41.32	-0.02	+0.02
$\alpha$ Aurigæ.....	5 4 48.36	+0.10	+0.01
$\beta$ Orionis.....	5 6 48.16	-0.05	+0.02
$\beta$ Tauri.....	5 16 7.12	-0.05	-0.03
$\delta$ Orionis.....	5 23 46.99	-0.12	.....
$\epsilon$ Orionis.....	5 28 2.75	-0.07	.....
$\alpha$ Orionis.....	5 46 27.41	-0.06	0.00
$\mu$ Geminorum.....	6 13 13.18	-0.01	.....

STAR.	Mean Right Ascension, 1839.0.	Difference from Nautical Almanac.	Difference from Berlin Ephemeris.
$\alpha$ Canis Majoris .....	<sup>h.</sup> <sup>m.</sup> <sup>s.</sup> 6 38 3.23	+0.12	+0.16
$\delta$ Geminorum .....	7 10 30.12	-0.11	.....
$\alpha$ Geminorum (mean of the two Stars).....}	7 24 18.82	.....	+0.17
$\alpha$ Canis Minoris .....	7 30 52.15	-0.23	-0.08
$\beta$ Geminorum.....	7 35 27.24	-0.15	+0.01
$\epsilon$ Hydræ.....	8 38 14.69	-0.25	.....
$\alpha$ Hydræ.....	9 19 40.48	-0.14	+0.06
$\epsilon$ Leonis.....	9 36 41.98	-0.19	.....
$\alpha$ Leonis.....	9 59 47.43	-0.28	+0.01
$\delta$ Leonis.....	11 5 32.21	+0.07	.....
$\delta$ Hydræ & Crateris.....	11 11 17.69	-0.13	.....
$\beta$ Leonis.....	11 40 50.52	-0.12	+0.01
$\beta$ Corvi.....	12 25 56.49	-0.08	.....
12 Canum Venaticorum.....	12 48 29.16	-0.31	.....
$\alpha$ Virginis.....	13 16 43.13	-0.08	-0.05
$\eta$ Bootis.....	13 47 1.10	-0.19	.....
$\alpha$ Bootis.....	14 8 19.18	-0.05	+0.01
$\epsilon$ Bootis.....	14 37 57.30	-0.08	.....
$\alpha^2$ Libræ.....	14 41 58.96	-0.17	-0.03
$\beta$ Libræ.....	15 8 21.03	-0.17	.....
$\alpha$ Coronæ borealis.....	15 27 52.35	+0.01	+0.01
$\alpha$ Serpentis.....	15 36 20.51	+0.01	-0.04
$\beta^1$ Scorpïi.....	15 56 5.06	-0.15	.....
$\delta$ Ophiuchi.....	16 5 54.79	-0.10	.....
$\alpha$ Scorpïi.....	16 19 32.81	-0.02	0.00
$\alpha$ Herculis.....	17 7 18.49	-0.07	-0.04
$\alpha$ Ophiuchi.....	17 27 27.77	-0.02	+0.06
$\alpha$ Lyræ.....	18 31 29.23	+0.06	-0.03
$\beta$ Lyræ.....	18 44 8.17	-0.11	.....
$\zeta$ Aquilæ.....	18 58 0.58	-0.11	.....
$\delta$ Aquilæ.....	19 17 22.78	+0.09	.....
$\gamma$ Aquilæ.....	19 38 36.28	-0.08	-0.07
$\alpha$ Aquilæ.....	19 42 55.61	-0.08	-0.03
$\beta$ Aquilæ.....	19 47 24.23	-0.10	-0.10
$\alpha^2$ Capricorni.....	20 9 6.99	-0.02	-0.07
$\alpha$ Cygni.....	20 35 56.64	-0.09	-0.03
$\zeta$ Cygni.....	21 6 5.20	-0.08	.....
$\beta$ Aquarii.....	21 23 4.73	-0.02	.....
$\epsilon$ Pegasi.....	21 36 16.67	-0.11	.....
$\alpha$ Aquarii.....	21 57 30.76	-0.08	0.00
$\zeta$ Pegasi.....	22 33 25.96	-0.06	.....
$\alpha$ Pegasi.....	22 56 44.70	-0.07	-0.02
$\epsilon$ Piscium.....	23 31 40.31	+0.11	.....
$\alpha$ Ursæ Minoris .....	1 1 54.40	+0.11	-0.55
$\delta$ Ursæ Minoris .....	18 24 14.86	-0.82	-0.41



The mean difference of the Right Ascensions of the Stars, employed for determining the correction of the Clock, from the Right Ascensions of the Nautical Almanac, is  $-0^s.08$ ; and from those of the Berlin Ephemeris or *Tabulæ Regiomontanae*,  $0^s.00$ .

The mean Right Ascensions are converted into apparent by the application of the reductions of mean to apparent places taken from the Nautical Almanac. The Correction of the Clock is determined from the observed transits of the Stars in the foregoing Table (except  $\alpha$  and  $\delta$  *Ursæ Minoris*), the Correction of Instrument being previously applied, compared with their apparent Right Ascensions.

An irregularity appeared to have taken place in the rate of the Clock on March 1; on which account, for determining its correction to be applied to the observations of Mars and the Moon, six Zodiacal Stars were employed, whose mean Right Ascensions for the beginning of the year were, from the previous observations, found to be,

	<i>h.</i>	<i>m.</i>	<i>s.</i>
A. S. C. 1390.....	11	55	31.15
10 Virginis .....	12	1	26.10
$\eta$ Virginis.....	12	11	40.25
17 Virginis .....	12	14	20.70
A. S. C. 1434.....	12	20	5.97
21 Virginis .....	12	25	28.24

The corrections of the Clock thus determined are contained in the column entitled Correction of Clock observed. When (as is generally the case) several Stars have been observed for the correction of the Clock within the same period of 24 hours, they are comprised in one group, and the mean of the corrections of the Clock, given by the observations, is held to be the correction corresponding to the mean of the times. The beginning and end of each group are indicated by the horizontal lines in the column of Correction of Clock observed. These means, and the corrections obtained from single Stars when only one Star has been observed, with the corresponding times, are contained in the Table, pp. 76-79. For intermediate times, prior to August 31, the corrections are deduced from those immediately preceding and following by simple interpolation, and are entered in the column of the observations bearing the title Correction of Clock interpolated. For the more ready calculation of the interpolated corrections of the Clock, its daily rate, or  $r$ , is given in the same Table, and, for the period prior to August 31, it is assumed to be the variation in 24 hours of the Clock's correction during the interval between the date to which it belongs and the one next following. For the period between August 31 and the end of the year there is given in the Table the quantity  $r'$  for determining the effect of second differences in computing the interpolated correction of the Clock, which is assumed to be expressed by the formula,

$$\text{Tabular Correction} + tr + t^2 r',$$

$t$  denoting the interval in fraction of a day between the given time and the tabular

time to which the correction and  $r$  and  $r'$  belong. In computing the correction of the Clock by this formula for any given date, the tabular values of the correction,  $r$  and  $r'$ , are taken for the date nearest to the one given. The values of  $r$  and  $r'$  for each tabular date were determined by substituting in the formula the values of the correction of the Clock and  $t$ , belonging to the tabular date, and those immediately preceding and following it.

When the correction of the Clock has been obtained from the observation of one Star only, the column of Apparent Right Ascension observed is not filled up for that Star, as it would reproduce the Right Ascension assumed for determining the Clock-correction. For a similar reason, when the elements for the correction of the instrument have been deduced from observations of one of the two Stars,  $\alpha$  and  $\delta$  *Ursæ Minoris*, (the observations above and below the Pole being considered to be of different stars), this column is not filled up for that Star.

The observed apparent Right Ascensions of the Stars, contained in the last column, are reduced to mean Right Ascensions at the commencement of 1839, the values of precession, nutation, aberration, and proper motion being assumed, as in the Nautical Almanac and Astronomical Society's Catalogue. The individual results are contained in the Table, pp. 79-93, and the mean results are given in the Catalogue, pp. 146-157. The Right Ascensions of the Stars employed for determining the correction of the Clock being, on an average, the same as those of the Berlin Ephemeris or *Tabulæ Regiomontanæ*, the zero point of the Catalogue is the position of the Equinox assumed in these Tables.

#### *Observations made with the Mural Circle.*

All the observations were made by myself.

There are five vertical Wires in the Telescope, and the equatorial interval between two adjoining vertical wires is 18.1 seconds of sidereal time. The moveable wire is placed at a distance of 7" of space nearly from the fixed horizontal wire, and the object observed bisects the intervening space.

The Telescope remained fixed to the limb of the Circle from the commencement of the observations in 1834 till January 1, 1839, when it was moved about 90°, and being again fixed to the Circle, it remained in this position during the year.

The observations have been read off with the two horizontal Microscopes I and II. A few observations of the Sun have been made by previously setting the Circle approximately to the position of one of the limbs, and reading off the two Microscopes, and afterwards making the line of collimation to coincide with the limb, and reading off Microscope I. In these cases, the previous indications of the



Microscopes are entered in the columns, and the differences between the two readings of Microscope I are subjoined in its column. These differences applied to the mean of the two Microscopes, give the mean Readings of the Circle for those observations.

To the mean of the two Microscopes a correction is applied, given in the column titled Correction, which was taken from the Table in Vol. III. p. xv., constructed from the formula investigated in the Introduction to Vol. I. pp. viii-ix., for reducing angles measured with two Microscopes to the quantities which would have been obtained from six.

In reading off the observations the cross-wires of the Microscopes were made to bisect the sets of divisions immediately preceding the zero point of Microscope I, when this Microscope indicated a quantity less than  $2' 30''$  to be added to the degrees and minutes of the preceding division; and the sets immediately following the same point, when the quantity indicated to be added was greater than  $2' 30''$ : except the observations distinguished by asterisks in the column of Object observed, in which the reverse rule was observed. The mean values of the runs of the Microscopes for the different portions of the year are given in the Table, p. 134, being the means of values found from sets of readings made at the beginning and end of each period.

To correct the mean of the readings of the Microscopes for the difference of the runs from  $300''$ , let the mean quantity indicated to be added to the degrees and minutes of the preceding divisions be denoted by  $m$ , when the divisions bisected preceded the zero point of Microscope I, and by  $m'$  when they followed this point, and let  $r$  denote the mean value of the runs taken from the Table. Then the correct quantity to be added is

$$\frac{300'' m}{r}, \quad \text{or,} \quad \frac{300'' (m' + r - 300'')}{r}.$$

The mean Reading of the Circle is found by applying the Correction for two Microscopes to the mean of the Microscopes corrected for runs. The degrees and minutes given under mean reading of Circle are those which were under Microscope I.

The observations were made at the transits of the objects over the meridian, or of their centres, in the cases of the Sun, Moon, and Planets, unless otherwise mentioned in the Notes, where the necessary information is given for determining the horary angle, and thence the reduction to the meridian. The times of the observations are given by the Assistant Clock placed beside the Circle, its rate being sufficiently uniform for reducing the observations. The corrections to be applied to this Clock to obtain the true sidereal time are given in the Table, pp. 134-135. Transits of Stars over Wire III were frequently observed, for the purpose of ascertaining its deviation from the meridian; and it appeared that,

during the period from January 1 to March 30, Wire III was west of the meridian by the following quantities :

Declination.	Deviation.	Deviation reduced to great Circle.
° ' "	seconds.	seconds.
- 11 20	5.4 of time.	5.3
+ 23 6	5.9 ~~~~~	5.4
46 50	8.0 ~~~~~	5.5
69 40	15.4 ~~~~~	5.3
86 35	86.0 ~~~~~	5.1
88 27	182.2 ~~~~~	4.9
88 49 S. P.	238.5 ~~~~~	4.9
86 35 S. P.	81.8 ~~~~~	4.9

The transits over Wire III above the Pole being later than the transits over the meridian by the quantities here stated, and under the Pole earlier.

On March 30 the Wire-plate was moved to bring Wire III nearer the meridian, as mentioned in the Notes to that day's observations, and from the transits of Stars observed during the remainder of the year, it appeared that Wire III was west of the meridian by the following quantities :

Declination.	Deviation.	Deviation reduced to great Circle.
° ' "	seconds.	seconds.
- 15 8	0.8 of time.	0.7
+ 19 15	0.9 ~~~~~	0.8
51 27	1.8 ~~~~~	1.1
71 0	2.8 ~~~~~	0.9
86 35	12.2 ~~~~~	0.7
87 16	11.0 ~~~~~	0.5
88 27	27.3 ~~~~~	0.7
88 50	29.6 ~~~~~	0.6
88 27 S. P.	18.4 ~~~~~	0.5
87 16 S. P.	10.0 ~~~~~	0.5

The transits over Wire III above the Pole being later than the transits over the meridian by the quantities here stated, and under the Pole earlier.

The Reduction to the Meridian for Stars is composed of two terms. The first, depending on the deviation of the Star's parallel from a great circle, is computed from the formula,

$$\frac{225''}{4} \sin 1'' \sin 2 D \times t^2$$

$D$  denoting the Declination of the object, and  $t$  its horary angle, expressed in seconds of time, and  $\sin 2 D$  being negative for objects south of the Equator or below the Pole. The second, depending on a small inclination of the horizontal wire of the Circle is, during the period from January 1 to March 30, computed from the formula,

$$- 0''.0123 \cos D \times t$$



$t$  being positive when the time of observation is after the meridian transit; and, during the remainder of the year, from the formula

$$- 0''.0093' \cos D \times t$$

The coefficients were deduced from a comparison of the observations of  $\alpha$  *Ursæ Minoris*, made, during this year, at various distances from Wire III. The Reduction for the Sun, Moon, and Planets, has also a third term, being the change of declination during the interval between the time of observation and the meridian transit, positive when the body is moving to the north, and the time of observation is after the transit, or when the body is moving to the south, and the time of observation is before the transit, and negative in other cases.

The Refractions are computed, by Mr IVORY'S Tables in the Philosophical Transactions for 1838, the zenith distance being made equal to the difference between the mean reading of the Circle, and the position of the Equatorial point adopted diminished by the Latitude.

To the mean reading of the Circle, the reduction to the meridian and refraction are applied, according to their signs, and the result is the reduced reading of the Circle, or the reading for the meridian observation, clear of the effect of refraction. The reduced readings are converted into Declinations by the following process.

The mean Declinations of the principal Stars, derived from the observations since 1834, were reduced to the beginning of 1839, by the application of the annual precessions and proper motions. The subjoined Catalogue of mean Declinations for January 1, 1839, was thus formed :

STAR.	Mean Declination, 1839-0.	Difference from Nautical Almanac.	Difference from Berlin Ephemeris.
	° ' "	"	"
$\lambda$ <i>Ursæ Minoris</i> .....	+ 88 49 33.0	+ 0.2	.....
$\alpha$ <i>Ursæ Minoris</i> .....	88 27 3.0	+ 0.4	+ 0.3
$\delta$ (Hevelii) <i>Cephei</i> .....	87 15 47.2	+ 2.7	.....
$\delta$ <i>Ursæ Minoris</i> .....	86 35 27.5	+ 0.8	+ 0.3
$\epsilon$ <i>Ursæ Minoris</i> .....	82 17 27.7	+ 0.4	.....
$\zeta$ <i>Ursæ Minoris</i> .....	78 17 11.6	+ 0.7	.....
$\gamma$ <i>Cephei</i> .....	76 44 2.6	+ 0.7	.....
$\beta$ <i>Ursæ Minoris</i> .....	74 48 48.0	- 0.9	+ 0.3
$\beta$ <i>Cephei</i> .....	69 51 17.4	- 0.1	+ 1.4
$\alpha$ <i>Ursæ Majoris</i> .....	62 37 6.4	- 1.8	+ 0.3
$\alpha$ <i>Cephei</i> .....	61 54 18.7	+ 0.8	+ 1.8
$\eta$ <i>Draconis</i> .....	61 52 48.6	+ 0.7	.....
$\zeta$ <i>Ursæ Majoris</i> .....	55 46 4.5	.....	.....
$\alpha$ <i>Cassiopeiæ</i> .....	55 39 12.2	+ 0.1	+ 1.1
$\gamma$ <i>Ursæ Majoris</i> .....	54 35 23.8	- 0.9	+ 1.5

STAR.	Mean Declination, 1839-0.	Difference from Nautical Almanac.	Difference from Berlin Ephemeris.
$\beta$ Draconis .....	+ 52 25 23.9	+ 0.2	.....
$\theta$ Ursæ Majoris .....	52 24 24.1	+ 0.5	.....
$\gamma$ Draconis .....	51 30 37.8	+ 0.1	+ 1.5
$\eta$ Ursæ Majoris .....	50 7 8.9	- 0.5	+ 0.6
$\alpha$ Persei .....	49 16 54.8	- 0.6	+ 0.7
$\epsilon$ Ursæ Majoris .....	48 40 6.2	- 1.7	.....
$\alpha$ Aurigæ .....	45 49 33.1	- 4.9	0.0
$\beta$ Aurigæ .....	44 55 20.4	.....	.....
$\alpha$ Cygni .....	44 42 29.1	+ 0.3	+ 1.5
12 Canum Venaticorum .....	39 11 21.3	- 0.5	.....
$\alpha$ Lyrae .....	38 38 16.1	+ 2.0	+ 1.5
$\beta$ Lyrae .....	33 10 48.7	+ 0.2	.....
$\alpha$ Geminorum following .....	32 14 3.5	- 2.6	0.0
$\zeta$ Cygni .....	29 34 11.1	- 1.9	.....
$\beta$ Tauri .....	28 27 51.6	- 2.8	+ 1.6
$\beta$ Geminorum .....	28 24 31.7	- 2.0	+ 0.7
$\alpha$ Andromedæ .....	28 12 5.3	- 1.7	+ 0.4
$\epsilon$ Bootis .....	27 45 23.0	- 1.2	.....
$\alpha$ Coronæ borealis .....	27 15 38.1	- 2.0	+ 0.3
$\beta$ Pegasi .....	27 12 39.8	.....	.....
$\epsilon$ Leonis .....	24 30 44.0	- 0.8	.....
$\eta$ Tauri .....	23 36 5.8	- 1.8	.....
$\alpha$ Arietis .....	22 41 52.0	- 2.4	+ 0.4
$\mu$ Geminorum .....	22 35 22.4	- 1.1	.....
$\delta$ Geminorum .....	22 16 19.9	- 0.9	.....
$\delta$ Leonis .....	21 24 17.4	- 2.4	.....
$\alpha$ Bootis .....	20 1 25.1	- 1.5	+ 0.5
$\eta$ Bootis .....	19 12 28.1	- 3.1	.....
$\alpha$ Tauri .....	16 10 46.5	- 2.4	+ 0.9
$\beta$ Leonis .....	15 28 18.6	- 2.5	+ 0.3
$\alpha$ Herculis .....	14 34 44.7	- 1.3	+ 1.2
$\alpha$ Pegasi .....	14 20 25.7	- 1.9	+ 0.5
$\gamma$ Pegasi .....	14 17 17.6	- 1.2	+ 0.8
$\zeta$ Aquilæ .....	13 37 46.1	- 2.1	.....
$\alpha$ Leonis .....	12 45 4.9	- 2.1	+ 0.7
$\alpha$ Ophiuchi .....	12 40 57.5	- 4.0	+ 0.5
$\gamma$ Aquilæ .....	10 13 33.2	- 1.3	+ 1.1
$\zeta$ Pegasi .....	9 59 33.7	- 1.5	.....
$\epsilon$ Pegasi .....	9 8 23.2	- 2.4	.....
$\alpha$ Aquilæ .....	8 26 53.3	+ 1.8	+ 0.9
$\alpha$ Orionis .....	7 22 14.3	- 1.6	+ 0.4
$\epsilon$ Hydræ .....	7 0 16.6	- 2.8	.....
$\alpha$ Serpentis .....	6 56 12.2	- 2.4	+ 0.8
$\gamma$ Orionis .....	6 11 51.1	.....	.....
$\beta$ Aquilæ .....	6 0 34.5	- 1.4	+ 1.7
$\alpha$ Canis Minoris .....	5 37 56.0	- 1.6	+ 2.5



STAR.	Mean Declination, 1839.3.	Difference from Nautical Almanac.	Difference from Berlin Ephemeris.
♌ Piscium.....	+ 4 45 15.4	- 0.2	.....
♋ Ceti.....	3 27 13.9	- 1.6	+ 1.4
♏ Aquilæ.....	2 47 57.7	- 0.7	.....
♌ Orionis.....	- 0 25 26.7	- 0.4	.....
♈ Aquarii.....	1 5 57.0	- 1.7	+ 1.3
♋ Orionis.....	1 18 38.2	- 1.3	.....
♏ Ophiuchi.....	3 16 26.9	- 2.7	.....
♈ Aquarii.....	6 16 31.6	- 0.4	.....
♈ Hydræ.....	7 57 51.3	- 1.8	+ 1.1
♋ Orionis.....	8 23 35.1	- 1.2	+ 1.3
♋ Libræ.....	8 47 1.5	0.0	.....
♋ Ceti.....	9 0 56.6	- 1.7	.....
♋ Virginis.....	10 19 7.1	- 1.7	+ 1.9
♋ Capricorni.....	13 2 18.5	- 2.2	+ 2.7
♋ Hydræ & Crateris.....	13 54 28.6	0.0	.....
♋ Eridani.....	13 58 15.8	- 2.0	.....
♋ Libræ.....	15 22 5.9	- 2.9	+ 0.7
♋ Canis Majoris.....	16 30 2.1	- 1.8	+ 0.9

The apparent declinations of these standard Stars are obtained by applying the corrections of the Nautical Almanac; and being added to the reduced readings, give the positions of the Equatorial point observed, the seconds of which only, for the saving of space, appear in the column bearing that title, the degrees and minutes,  $56^{\circ} 0'$ , being constant during the year, after the Telescope was moved upon the limb of the Circle on January 1. A mean of the several values obtained during a certain interval, generally 24 hours, during which it is supposed that the position of this point remained without sensible change, is the Equatorial point adopted during the interval. The beginning and end of the intervals are indicated by horizontal lines in the columns of the Equatorial point observed; and the seconds of the Equatorial point adopted are given in the column having that title, at the beginning of each interval, and at the top of each page, the degrees and minutes,  $56^{\circ} 0'$ , having to be supplied. The adopted position of the Equatorial point on January 1, before the Telescope was moved,  $146^{\circ} 5' 51''.6$ , was obtained from the observation made on December 31, 1838. The Apparent Declination observed, given in the last column, is the difference between the reduced reading and the position of the Equatorial point adopted. In the case of the Sun, Moon, and Planets, the parallax in declination and semidiameter (when a limb has been observed) have still to be applied, in order to obtain the geocentric Declination of the centre.

The apparent Declinations of the Stars are converted into mean Declinations

for the beginning of 1839, by applying the corrections for precession, nutation, aberration, and proper motion, taken from the elements and subsidiary Tables given in the Nautical Almanac and Astronomical Society's Catalogue. The individual results are given at pp. 136–144; and the mean results are given in the Catalogue, pp. 146–157.

*Reduced Observations of the Sun, Moon, and Planets.*

The Tables, pp. 160–176, contain comparisons of the Right Ascensions and Declinations of the Sun, Moon, and Planets, and of the Diameters of the Sun, deduced from the observations, with the values computed from the Nautical Almanac.

When both limbs of the Sun or a Planet have been observed with the Transit Instrument, the mean of their Right Ascensions is taken for the Right Ascension of the centre. The observations of the second Limb of Mars, subsequent to March, have been corrected for the defect of illumination, as mentioned in the Note on p. 170.

When only one limb of the Sun or a Planet has been observed, the Right Ascension of the centre has been determined, by applying the semidiameter in Right Ascension taken from the Nautical Almanac.

The observed Right Ascensions of the Sun's and Planets' centres are compared with the values for the transits over the meridian of Edinburgh, computed from the Nautical Almanac.

From the observations of the Moon's diameter, made with the Transit Instrument and Mural Circle, it appears that the computed values given in the Nautical Almanac are too small. In reducing the observations of this year, the tabular semidiameter in Right Ascension has been increased by  $\frac{1}{340}$  part, and in Declination by  $\frac{1}{360}$  part. In Volume X. of the Memoirs of the Royal Astronomical Society, from a comparison of the Moon's declinations observed at Greenwich, Cambridge, and the Cape of Good Hope, I have found that the Moon's parallaxes in BURCKHARDT'S Tables, which are employed in the Nautical Almanac, should be increased in the proportion of 57' 0".5 to 57' 1".8. These corrections have been applied in comparing the observations of the Moon with the computations of the Almanac.

The observed Right Ascensions of the Moon's limbs (corrected in the observation of March 29 for defect of illuminated disc, as mentioned in the Note), are converted into observed Right Ascensions of the centre for the transit over the meridian by applying the time of the semidiameter passing the meridian, taken from the Nautical Almanac, and increased by  $\frac{1}{340}$  part as mentioned above. The observed Right Ascensions of the centre are then compared with the values for the transits over



the meridian of Edinburgh, computed from the list of Moon-culminating Stars in the Nautical Almanac.

The parallaxes in declination of the Sun, Moon, and Planets are computed on the supposition that the ratio of the Earth's axes is = 300 : 299, whence the reduced or geocentric Latitude is  $55^{\circ} 46' 43''$ , and the logarithm of the Earth's radius, 9.999008. For the Moon, the rigorous formula is adopted, viz.

$$\sin \text{parallax in declination} = r \times \sin \text{equatorial horizontal parallax} \times \sin (55^{\circ} 46' 43'' - \text{apparent Declination of limb})$$

$r$  denoting the Earth's radius.

For the Sun and Planets, the small arcs were taken in place of their sines.

The horizontal parallaxes and semidiameters were taken from the Almanac, the values for the Moon being corrected as above.

The parallax and semidiameter in declination being applied according to their signs (the sign of the semidiameter being + for an observation of the south limb, and - for an observation of the north) to the apparent Declination of the Sun or Planet, given in the last column of the Observations, the result is the geocentric Declination of the centre deduced from the observation. The difference between the apparent Declination of the Moon's limb and the geocentric Declination of the centre has been found from the formula,

$$\sin \text{difference} = \sin \text{parallax in declination} \pm \sin \text{horizontal semidiameter},$$

(+ for the observations of the south limb ; - for observations of the north).

The observations of Declination of the Moon's limbs that were not fully enlightened have been corrected for the defect of illumination by the quantities mentioned in the Notes, and obtained from trigonometrical calculation.

Some of the observations of the Declinations of Venus were made upon limbs that were not fully enlightened, and, as mentioned in the Notes to the observations, and on p. 168, the defect of illumination has been allowed for by diminishing the tabular semidiameter in the proper ratio found by trigonometrical calculation.

The Declinations of the centres of the Sun and Planets for the transits over the meridian of Edinburgh have been computed from the Nautical Almanac ; and of the Moon, from the list of Moon-culminating Stars in the same work.

The signs prefixed to the differences from the Nautical Almanac, or the differences between the observed and computed places, indicate the manner in which the differences are to be applied to the computed or tabular places to obtain the observed.

*Observations of the Comet of January 1840 ; Lunar Occultations of Stars ; and  
Eclipses of Jupiter's Satellites.*

These observations were made by myself.

In computing the true sidereal times, the personal equation mentioned on p. vi, has been taken into account, when the correction of the Clock depends on observations made by Mr WALLACE.

*Azimuths of the Meridian Marks.*

The azimuths of the Meridian marks have been determined according to the manner explained in the Introduction to the preceding Volume, pp. xxii-xxv.

SOUTH MARK.

Illuminated end of Axis West.

		$s$ °	( $n$ ) °	$b$ °	$c$ °	$S$ °
1839,						
Jan.	7 .....	+1.59	-0.38	+0.14	-0.10	-0.80
	11 .....	+1.68	-0.38	+0.14	-0.10	-0.89
May	29 .....	+1.06	-0.24	-0.02	-0.14	-0.80
June	7 .....	+1.09	-0.25	-0.04	-0.14	-0.84
	8 .....	+1.07	-0.27	-0.05	-0.14	-0.80
	11 .....	+1.04	-0.26	-0.08	-0.14	-0.83
	17 .....	+0.83	-0.16	-0.10	-0.14	-0.83
	19 .....	+1.01	-0.24	-0.09	-0.14	-0.85
Oct.	28 .....	+1.51	-0.40	+0.09	-0.10	-0.76
	29 .....	+1.52	-0.42	+0.08	-0.10	-0.75
	30 .....	+1.55	-0.41	+0.08	-0.10	-0.80
	31 .....	+1.57	-0.49	+0.07	-0.10	-0.69
Dec.	24 .....	+0.66	+0.11	+0.08	-0.10	-0.84
Mean,						-0.806

SOUTH MARK.

Illuminated end of Axis East.

		$s$ °	( $n$ ) °	$b$ °	$c$ °	$S$ °
1839,						
Jan.	3 .....	+1.69	-0.36	+0.16	+0.10	-0.71
	4 .....	+1.67	-0.37	+0.16	+0.10	-0.67
Feb.	11 .....	+1.65	-0.37	+0.11	+0.10	-0.74
	16 .....	+1.63	-0.26	+0.17	+0.10	-0.90
April	29 .....	+1.52	-0.44	+0.02	+0.13	-0.57

## INTRODUCTION.

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		$s$	$(n)$	$b$	$c$	$S$
1839,		$\frac{s}{\text{a.}}$	$\frac{(n)}{\text{a.}}$	$\frac{b}{\text{a.}}$	$\frac{c}{\text{a.}}$	$\frac{S}{\text{a.}}$
July	3	+1.38	-0.29	-0.05	+0.14	-0.80
	4	+1.36	-0.28	-0.06	+0.14	-0.81
	5	+1.35	-0.27	-0.07	+0.14	-0.83
	8	+1.31	-0.31	-0.11	+0.14	-0.78
	15	+1.29	-0.33	-0.06	+0.14	-0.65
Oct.	9	+1.67	-0.47	+0.02	+0.12	-0.68
	10	+1.63	-0.41	+0.01	+0.12	-0.76
Nov.	19	+1.57	-0.40	+0.06	+0.10	-0.67
	21	+1.65	-0.43	+0.08	+0.10	-0.66
Mean,						-0.731

## NORTH MARK.

Illuminated end of Axis West.

		$n$	$(n)$	$b$	$c$	$N$
1839,		$\frac{n}{\text{a.}}$	$\frac{(n)}{\text{a.}}$	$\frac{b}{\text{a.}}$	$\frac{c}{\text{a.}}$	$\frac{N}{\text{a.}}$
Jan.	7	-1.62	-0.38	+0.14	-0.10	+0.63
	11	-1.72	-0.38	+0.14	-0.10	+0.73
	15	-1.59	-0.38	+0.14	-0.10	+0.60
Feb.	6	-1.67	-0.39	+0.15	-0.10	+0.65
March	29	-1.55	-0.39	+0.15	-0.12	+0.51
May	29	-1.15	-0.24	-0.02	-0.14	+0.61
June	7	-1.17	-0.25	-0.04	-0.14	+0.64
	8	-1.18	-0.27	-0.05	-0.14	+0.63
	11	-1.13	-0.26	-0.08	-0.14	+0.64
	17	-0.96	-0.16	-0.10	-0.14	+0.68
	19	-1.15	-0.24	-0.09	-0.14	+0.71
Oct.	15	-1.35	-0.38	+0.01	-0.10	+0.56
	17	-1.41	-0.35	+0.02	-0.10	+0.66
	20	-1.50	-0.34	+0.03	-0.10	+0.75
	25	-1.37	-0.37	+0.07	-0.10	+0.50
	28	-1.51	-0.40	+0.09	-0.10	+0.56
	29	-1.53	-0.42	+0.08	-0.10	+0.56
	30	-1.56	-0.41	+0.08	-0.10	+0.61
	31	-1.56	-0.49	+0.07	-0.10	+0.48
Nov.	5	-1.51	-0.40	+0.06	-0.10	+0.61
	7	-1.52	-0.40	+0.05	-0.10	+0.63
	10	-1.46	-0.39	+0.05	-0.10	+0.59
Dec.	21	-0.72	+0.03	+0.09	-0.10	+0.54
	24	-0.67	+0.11	+0.08	-0.10	+0.65
	25	-0.66	+0.08	+0.09	-0.10	+0.57
	28	-0.95	+0.01	+0.11	-0.10	+0.70
Mean,						+0.615



## NORTH MARK.

## Illuminated end of Axis East.

1839,		$n$ $s.$	$(n)$ $s.$	$b$ $s.$	$c$ $s.$	$N$ $s.$
Jan.	3 .....	-1.36	-0.36	+0.16	+0.10	+0.58
Feb.	9 .....	-1.31	-0.29	+0.12	+0.10	+0.71
	11 .....	-1.29	-0.37	+0.11	+0.10	+0.57
	16 .....	-1.25	-0.26	+0.17	+0.10	+0.63
April	29 .....	-1.10	-0.44	+0.02	+0.13	+0.41
July	3 .....	-0.86	-0.29	-0.05	+0.14	+0.56
	4 .....	-0.81	-0.28	-0.06	+0.14	+0.54
	5 .....	-0.85	-0.27	-0.07	+0.14	+0.61
	8 .....	-0.83	-0.31	-0.11	+0.14	+0.58
	15 .....	-0.81	-0.33	-0.06	+0.14	+0.45
Oct.	9 .....	-1.21	-0.47	+0.02	+0.12	+0.46
	10 .....	-1.19	-0.41	+0.01	+0.12	+0.56
	13 .....	-1.14	-0.38	+0.01	+0.12	+0.57
Nov.	12 .....	-1.23	-0.34	+0.05	+0.10	+0.65
	19 .....	-1.20	-0.40	+0.06	+0.10	+0.50
	21 .....	-1.25	-0.43	+0.08	+0.10	+0.46
	22 .....	-1.27	-0.39	+0.09	+0.10	+0.54
	25 .....	-1.24	-0.33	+0.11	+0.10	+0.59
Mean,						+0.554

In these calculations the values of  $c$  are those given on p. viii. for Wire III, the values of  $s$  and  $n$  being the observed distances of that Wire from the marks.

A difference appears between the azimuths of the marks deduced from the observations made in the reversed positions of the axis. A similar difference appeared from the observations of the preceding year. This may be occasioned either by a difference between the diameters of the pivots, or by flexure in the Telescope or axis. The latter cause is the more probable, as no difference between the diameters of the pivots has been shewn by the Level. On the supposition of flexure the error of collimation may be represented by

$$c + f \cos Z$$

the illuminated end of the axis being West, and by

$$-c - f \cos Z$$

the illuminated end being East,  $Z$  denoting the Zenith distance. Therefore, in place of  $b$  in the foregoing expressions for the azimuths, there should be introduced  $(b+f)$  the illuminated end being West, and  $(b-f)$  the illuminated end being East. Consequently

$$S = -0.806 + f \tan L = -0.731 - f \tan L$$

$L$  denoting the Latitude ;

whence



$$f = + 0^s.0253$$

and

$$N = + 0^s.615 - f \tan L = + 0^s.554 + f \tan L$$

whence

$$f = + 0^s.0206$$

Assigning to the two values of  $f$  weights depending on the numbers of observations, that for the first being  $\frac{13 \times 14}{27} = 6.74$ , and that for the second being  $\frac{26 \times 18}{44} = 10.64$ , there is obtained

$$f = + 0^s.0224.$$

Adding this quantity to each of the values of  $b$  in the western position of the illuminated end, and subtracting it in the eastern, there are obtained the following mean values :

$$S = - 0^s.768 = - 11''.52 : 27 \text{ observations}$$

$$N = + 0^s.584 = + 8''.76 : 44 \text{ observations.}$$

A mistake was committed in the similar investigation of the preceding year, in taking for the value of  $c$ ,  $\pm 0^s.12$  the error of collimation for the mean of the Wires, in place of  $\pm 0^s.10$  the error of collimation for Wire III. When this error is corrected, the results from the observations of that year are

$$S = - 0^s.82 + f \tan L = - 0^s.74 - f \tan L$$

whence

$$f = + 0^s.0270 ;$$

and

$$N = + 0^s.63 - f \tan L = + 0^s.52 + f \tan L$$

whence

$$f = + 0^s.0375$$

Assigning to the two values of  $f$  weights depending on the numbers of observations, there is obtained

$$f = + 0^s.0348$$

Adding this quantity to each of the values of  $b$  in the western position of the illuminated end, and subtracting it in the eastern, there are obtained the following mean values :

$$S = - 0^s.785 = - 11''.78 : 14 \text{ observations}$$

$$N = + 0^s.574 = + 8''.61 : 37 \text{ observations}$$

Weights being assigned to the values from the observations of the two years depending on the number of observations, there are obtained

$$f = + 0^s.0273 : \text{weight } 28.67$$

$$S = - 0^s.774 = - 11''.61 : 41 \text{ observations}$$

$$N = + 0^s.579 = + 8''.69 : 81 \text{ observations}$$

Whence the South mark appears to be  $0^s.774$  of time, or  $11''.61$  of space, West of the meridian ; and the North mark,  $0^s.579$  of time, or  $8''.69$  of space, East of it.

*Polar point of the Circle.*

The means of all the determinations of the Declinations of the circumpolar Stars, obtained during this year, are

	Number of observations.	° ' "	Correction of Declinations. "	Relative Weight.
$\alpha$ Ursæ Minoris .....	40	88 27 3.0	- 0.15	52
.....S. P.	50	2.7		
Groombridge 750.....	2	85 6 58.3	+ 0.75	28
.....S. P.	5	59.8		
Groombridge 944.....	1	85 5 19.8	+ 0.25	21
.....S. P.	5	20.3		
51 (Hevelii) Cephei.....	13	87 15 47.2	- 0.05	42
.....S. P.	6	47.1		
Groombridge 1119.....	4	89 3 3.0	+ 0.70	27
.....S. P.	2	4.4		
Groombridge 2283 .....	5	87 50 5.8	+ 0.30	21
.....S. P.	1	6.4		
$\delta$ Ursæ Minoris .....	18	86 35 27.9	- 0.30	48
.....S. P.	19	27.3		
$\lambda$ Ursæ Minoris .....	12	88 49 33.9	- 0.45	40
.....S. P.	5	33.0		
Mean having regard to weights,			+ 0.03	

which may be regarded as an insensible quantity, and therefore the Polar point has been correctly assumed in the computation of the Declinations.

The above relative weights have been computed according to the calculus of probabilities, the probable error of a single observation of each Star being supposed  $0''.5$ , and the probable error of the mean of two Microscopes from error of division,  $0''.3$ .

*Position of the Ecliptic.*

Let  $x$  denote the correction of the Right Ascensions of all celestial objects, or the correction of the assumed position of the Equinoctial points in Right Ascension;  $y$ , the correction of the obliquity of the Ecliptic adopted in the Nautical Almanac;  $z$ , the correction of the Declinations of the Sun and other objects within the tropics, deduced from the observations; and  $y$ , the correction of the semidiameter of the Sun given in the Nautical Almanac. Then, by the method explained in the Introductions to the preceding Volumes, the following equations are obtained :

Date.	0 =	Probable Error.	Date.	0 =	Probable Error.
1839,	"	"	1839,	"	"
Jan. 2	+0.2+0.08 $x-0.98 y-z$ .....	1.38	June 13	-1.1+0.06 $x+0.99 y-z+u$	0.93
8	-5.5+0.12 $x-0.96 y-z$ .....	1.36	14	+1.5+0.05 $x+0.99 y-z$ .....	0.74
9	+0.8+0.13 $x-0.96 y-z+u$	1.69	15	+0.2+0.04 $x+0.99 y-z$ .....	0.74
12	+2.1+0.15 $x-0.94 y-z-u$	1.66	17	+1.5+0.03 $x+1.00 y-z$ .....	0.74
14	+1.0+0.16 $x-0.93 y-z+u$	1.66	18	+2.4+0.03 $x+1.00 y-z$ .....	0.74
15	+0.6+0.17 $x-0.92 y-z-u$	1.64	19	+3.1+0.02 $x+1.00 y-z$ .....	0.74
16	+1.3+0.18 $x-0.91 y-z+u$	1.63	25	+1.9-0.02 $x+1.00 y-z-u$	0.93
17	-0.9+0.18 $x-0.91 y-z-u$	1.63			
23	+0.5+0.22 $x-0.86 y-z+u$	1.57	July 1	+0.4-0.06 $x+0.99 y-z$ .....	0.74
25	-0.6+0.23 $x-0.85 y-z-u$	1.55	3	+1.3-0.08 $x+0.98 y-z$ .....	0.74
26	+0.5+0.24 $x-0.84 y-z+u$	1.54	4	+1.9-0.08 $x+0.98 y-z$ .....	0.74
30	-0.2+0.26 $x-0.80 y-z-u$	1.49	5	+0.9-0.09 $x+0.98 y-z$ .....	0.74
			8	+0.9-0.11 $x+0.97 y-z$ .....	0.74
Feb. 5	+4.4+0.30 $x-0.72 y-z+u$	1.42	9	+1.8-0.11 $x+0.96 y-z+u$	0.93
6	+0.9+0.31 $x-0.71 y-z-u$	1.41	13	+1.8-0.14 $x+0.95 y-z-u$	0.93
7	+3.1+0.31 $x-0.70 y-z+u$	1.40	25	+0.5-0.21 $x+0.87 y-z+u$	0.93
15	+0.7+0.35 $x-0.59 y-z-u$	1.30	26	+1.9-0.22 $x+0.86 y-z$ .....	0.74
18	+1.4+0.36 $x-0.55 y-z+u$	1.27	29	+0.9-0.24 $x+0.84 y-z+u$	0.93
19	-0.8+0.37 $x-0.53 y-z-u$	1.26	30	+2.8-0.25 $x+0.83 y-z$ .....	0.74
22	-1.1+0.38 $x-0.49 y-z+u$	1.22			
23	-0.9+0.38 $x-0.47 y-z-u$	1.21	Aug. 1	+0.4-0.26 $x+0.81 y-z$ .....	0.74
25	+2.1+0.39 $x-0.43 y-z+u$	1.19			
26	-1.2+0.40 $x-0.42 y-z-u$	1.17	Sept. 13	+1.7-0.43 $x+0.19 y-z$ .....	0.78
27	+0.7+0.40 $x-0.40 y-z+u$	1.16	19	+2.2-0.43 $x+0.08 y-z+u$	0.98
			21	+1.7-0.43 $x+0.04 y-z+u$	0.98
Mar. 1	-1.5+0.41 $x-0.36 y-z-u$	1.14	23	+1.9-0.43 $x$ ..... $-z-u$	0.99
4	+1.8+0.41 $x-0.31 y-z+u$	1.11	24	+2.6-0.43 $x-0.01 y-z+u$	0.99
12	-0.3+0.43 $x-0.17 y-z-u$	1.05	26	+0.1-0.43 $x-0.05 y-z-u$	1.00
13	+0.2+0.43 $x-0.14 y-z+u$	1.04			
19	+0.4+0.43 $x-0.03 y-z$ .....	0.79	Oct. 2	+0.1-0.43 $x-0.17 y-z-u$	1.05
22	-1.0+0.43 $x+0.02 y-z-u$	0.98	3	+2.8-0.43 $x-0.19 y-z+u$	1.06
25	+0.7+0.43 $x+0.08 y-z-u$	0.98	5	+1.3-0.42 $x-0.22 y-z-u$	1.07
26	+2.0+0.43 $x+0.09 y-z$ .....	0.78	7	+0.2-0.42 $x-0.26 y-z+u$	1.09
30	+0.2+0.43 $x+0.18 y-z$ .....	0.78	9	-1.8-0.42 $x-0.29 y-z-u$	1.10
			10	-0.2-0.41 $x-0.30 y-z+u$	1.10
April 8	-0.1+0.41 $x+0.33 y-z$ .....	0.77	11	+1.6-0.41 $x-0.32 y-z-u$	1.12
11	+1.5+0.40 $x+0.39 y-z$ .....	0.77	15	-1.6-0.40 $x-0.40 y-z+u$	1.17
12	-0.8+0.40 $x+0.40 y-z$ .....	0.77	18	+0.2-0.39 $x-0.44 y-z-u$	1.19
20	+0.2+0.37 $x+0.53 y-z$ .....	0.76	19	+0.5-0.38 $x-0.46 y-z+u$	1.20
24	+0.1+0.35 $x+0.59 y-z$ .....	0.76	25	-0.1-0.36 $x-0.56 y-z-u$	1.27
27	-1.4+0.34 $x+0.63 y-z$ .....	0.75	28	+1.0-0.35 $x-0.60 y-z+u$	1.31
			30	+0.8-0.34 $x-0.63 y-z-u$	1.34
May 1	-0.6+0.32 $x+0.68 y-z-u$	0.94			
2	-0.1+0.31 $x+0.69 y-z$ .....	0.75	Nov. 9	-0.1-0.29 $x-0.76 y-z+u$	1.45
11	+1.2+0.26 $x+0.80 y-z$ .....	0.74	11	+2.1-0.27 $x-0.78 y-z-u$	1.47
17	-0.8+0.23 $x+0.86 y-z-u$	0.93	12	+4.8-0.27 $x-0.79 y-z+u$	1.48
20	+1.3+0.21 $x+0.88 y-z+u$	0.93	20	-0.3-0.22 $x-0.86 y-z-u$	1.56
24	+0.7+0.18 $x+0.91 y-z-u$	0.93	23	-0.5-0.20 $x-0.89 y-z+u$	1.61
25	+3.6+0.18 $x+0.91 y-z+u$	0.93	27	-0.5-0.17 $x-0.92 y-z-u$	1.64
27	+0.3+0.16 $x+0.93 y-z$ .....	0.74			
28	-0.2+0.16 $x+0.93 y-z$ .....	0.74	Dec. 6	+2.8-0.11 $x-0.96 y-z+u$	1.70
29	+1.8+0.15 $x+0.94 y-z$ .....	0.74	7	-0.6-0.11 $x-0.97 y-z-u$	1.71
30	-0.8+0.15 $x+0.94 y-z+u$	0.93	21	-0.1-0.01 $x-1.00 y-z+u$	1.75
			23	+1.8+0.01 $x-1.00 y-z-u$	1.75
June 1	+0.3+0.13 $x+0.95 y-z$ .....	0.74	25	-0.4+0.02 $x-1.00 y-z+u$	1.75
5	+2.0+0.11 $x+0.97 y-z$ .....	0.74	26	-2.1+0.03 $x-1.00 y-z-u$	1.75
11	+1.6+0.07 $x+0.99 y-z$ .....	0.74	28	-1.3+0.04 $x-0.99 y-z+u$	1.75



On resolving these equations by the method of *minimum* squares, final equations are obtained :

$$\begin{aligned} 0 &= -5.47 + 8.820x + 2.460y - 5.510z - 1.577u \\ 0 &= +49.91 + 2.460x + 59.260y - 37.194z + 2.089u \\ 0 &= -83.11 - 5.510x - 37.194y + 106.139z - 1.654u \\ 0 &= +22.46 - 1.577x + 2.089y - 1.654z + 50.014u \end{aligned}$$

Whence, by elimination,

$$\begin{array}{lcl} x = & +1.10 & \dots\dots\dots \text{Weight, } 8.53 \\ y = & -0.45 & \dots\dots\dots 46.14 \\ z = & +0.68 & \dots\dots\dots 80.97 \\ u = & -0.37 & \dots\dots\dots 49.61 \end{array} \left. \vphantom{\begin{array}{l} x \\ y \\ z \\ u \end{array}} \right\} \begin{array}{l} \text{observations, each having a} \\ \text{probable error of } 1''. \end{array}$$

It therefore appears, from the observations of this year, that the Right Ascensions of the Sun, Stars, and all objects, should be increased by  $1''.10$  of space or  $0^s.07$  of time, for the correction of the assumed position of the Equinoctial points ; that the obliquity of the Ecliptic adopted in the Nautical Almanac should be diminished by  $0''.45$ , whence the obliquity for the beginning of 1839, deduced from the observations, is  $23^\circ 27' 36''.53$  ; that the northern Declinations of the Sun and bodies within the tropics, given by the Circle and the assumed elements of reduction, should be increased by  $0''.68$ , and the southern Declinations diminished by the same quantity ; and that the Sun's semidiameter in the Nautical Almanac, taken from the *Tabulæ Regiomontanæ*, should be diminished by  $0''.37$ , to satisfy the observations of both limbs made with the Circle on different days.

The means of the various values of  $x$ ,  $y$ , and  $u$  deduced from the observations of 1834–9, having regard to the weights, are

$$\begin{array}{lcl} x = & +0.90 & \dots\dots\dots \text{Weight, } 47.36 \\ y = & -0.12 & \dots\dots\dots 207.72 \\ u = & -0.32 & \dots\dots\dots 391.58 \end{array}$$

Whence it appears from the observations of 1834–9 that the Right Ascensions of all objects should be increased by  $0''.90$  of space, or  $0^s.06$  of time, for the correction of the Equinoctial points ; that the obliquity of the Ecliptic adopted in the Nautical Almanac should be diminished by  $0''.12$  ; and that the Sun's diameter in the Nautical Almanac and *Tabulæ Regiomontanæ* should be diminished by  $0''.64$ , to satisfy the observations of both limbs made with the Circle on different days.

#### *The Sun's Diameter.*

The mean difference between the observed sidereal times of the Sun's diameter passing the meridian and the quantities given in the Nautical Almanac, is,

From the observations of 1834-5	+ 0.04.....	172 observations.
1836	0.00.....	153
1837	- 0.08.....	151
1838	- 0.05.....	141
1839	- 0.08.....	132
Mean,	- 0.03.....	749

corresponding to a correction of  $-0''.43$  in the value of the Sun's horizontal diameter.

The mean difference between the vertical diameters of the Sun measured with the Mural Circle and the quantities given in the Nautical Almanac is,

From the observations of 1837	- 1.60.....	12 observations.
1838	- 0.12.....	54
1839	+ 0.11.....	34
Mean,	- 0.22 .....	100

From the Circle-observations discussed under the preceding title, the correction of the Sun's diameter has been found to be  $-0''.64$ .

Assigning to the first value the relative weight 51.8, and to the second, 97.9, (found from the calculus of probabilities), the correction of the Sun's vertical diameter becomes  $-0''.49$ .

On the whole it appears that both the Transit Instrument and Mural Circle make the Sun's diameter about a half second of space less than the value adopted in the Nautical Almanac and *Tabulæ Regiomontanæ*.

### *The Moon's Diameter.*

Observed Sidereal times of the Moon's Diameter passing the Meridian.

#### 1. BRIGHT LIMBS.

Date.	Observed Time.	Difference from Nautical Almanac.
1839, March 29	m. s. 2 1.69	s. + 0.07
Mean of 13 observations, }	2 19.83	+ 0.27
2. BRIGHT AND DARK LIMBS.		
1839, January 7	m. s. 2 4.02	s. + 0.18
8	2 7.40	+ 0.20
December 27	2 4.14	+ 0.04
28	2 5.62	+ 0.26
Mean of 12 observations, }	2 9.09	+ 0.06

## Vertical Diameter of the Moon observed with the Mural Circle.

Date.	Vertical Diameter of the Moon from observation.	Difference from Nautical Almanac.
1839,	' "	"
February 22	31 18.0	+2.3
April 27	29 29.5	+6.2
September 22	32 53.5	+2.0
November 19	33 29.8	+6.5
December 21	32 36.4	+1.9
Mean of 11 ob- servations, }	31 37.7	+3.2

The mean results comprehend the observations of preceding years, given in the Introduction to the preceding Volume, pp. xxxi-xxxii.

The defect of illuminated disc has been allowed for as mentioned in the Notes to the observations.

The vertical diameters of the Moon deduced from the observations with the Mural Circle are the quantities, which being employed in the calculations make the geocentric Declinations of the Moon's Centre, obtained from the observations of both limbs, agree.

From the observations of the bright limbs made with the Transit Instrument and Mural Circle, it appears that the Moon's diameter, computed from BURCKHARDT'S Tables, should be increased in the following proportions:

Transit Instrument,.....	1 : 1.00193
Mural Circle,.....	1 : 1.00169

---

Mean, 1 : 1.00181

corresponding to an increase of  $\frac{1}{252}$  part.

From the observations of the dark limb when visible made with the Transit Instrument, and from the result of the observations of the Solar Eclipse on May 15, 1836, there appears to be no increase required of the diameter of the non-illuminated disc, but rather a small diminution. This seems to indicate that the apparent increase of the diameter of the illuminated disc is caused by irradiation.



*Observations of the Sun.*

The mean difference between the Sun's observed and tabular Right Ascensions is,

From winter Solstice 1838 to spring Equinox 1839, .....	+ 0 <sup>s</sup> .13 .....	44 observations.
From spring Equinox to summer Solstice 1839, .....	+ 0.10 .....	37 .....
From summer Solstice to autumnal Equinox 1839, .....	+ 0.10 .....	40 .....
From autumnal Equinox to winter Solstice 1839, .....	- 0.03 .....	31 .....
and		
From winter Solstice 1838 to winter Solstice 1839, .....	+ 0.08 .....	152 .....

*Observations of the Moon.*

The mean difference between the observed and tabular Right Ascensions of the Moon (excluding the observations of the dark limb) is,

First limb, .....	54 observations,	$\frac{s}{s}$ -0.32
Second limb, .....	25 .....	-0.50
Mean of the .....	79 .....	-0.38

The mean difference between the observed and tabular Declinations of the Moon is,

North limb, .....	34 observations,	— 0·7
South limb, .....	32 .....	— 2·4
Mean of the .....	66 .....	— 1·5

*Oppositions and Inferior Conjunctions of the Planets.*

The corrections of the Planets' places have been determined in the manner explained in the Introduction to Vol. I.

*Inferior Conjunction of Venus, October 5, 1839.*

Correction of Sun's Right Ascension, = - 0<sup>s</sup>.03, mean of 15 observations, Sept. 21—Oct. 17.

Whence

Correction of Sun's Longitude, = - 0<sup>"</sup>.5.

Whence	Correction of Planet's Heliocentric Longitude, -7.0 ----- Latitude, -6.6
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Correction of Planet's Geocentric Right Ascension,  $-0^{\text{s}}.06$ : 12 observations, Feb. 27—March 25.  
 ..... Declination, .....  $-2''.0$ : 10 ..... Feb. 27—March 25.  
 ..... Sun's Right Ascension, .....  $+0^{\text{s}}.17$ : 9 ..... Feb. 27—March 25.

*Opposition of Vesta, December 29, 1838.*

Correction of Planet's Geocentric Right Ascension, $-0^{\circ}.07$ :	11 observations,	Dec. 17—Jan. 14.
Declination, $+20''\cdot6$ :	10	Dec. 17—Jan. 14.
Sun's Right Ascension, $+0^{\circ}.02$ :	13	Dec. 17—Jan. 14.

*Opposition of Juno, October 12, 1839.*

Correction of Planet's Geocentric Right Ascension, —	1 <sup>h</sup> .91 : 10 observations,	Sept. 28—Oct. 19.
Declination, .....	— 15''3 : 10 .....	Sept. 28—Oct. 19.
Sun's Right Ascension, .....	— 0 <sup>h</sup> .01 : 12 .....	Sept. 30—Oct. 19.

Whence	Correction of Planet's Geocentric Longitude,	— 33.0
	Latitude,...	— 3.4
	Sun's Longitude,.....	— 0.2
	Planet's Heliocentric Longitude,	— 17.0
	Latitude,	— 1.8

*Opposition of Pallas, March 31, 1839.*

Correction of Planet's Geocentric Right Ascension,  $-22^{\circ}87'$ : 8 observations, March 18—April 10.  
 ----- Declination,.....  $+ 3''.1$ : 6 ----- March 18—April 10.  
 ----- Sun's Right Ascension, .....  $+ 0^{\circ}24'$ : 8 ----- March 19—April 10.

Whence                      Correction of Planet's Geocentric Longitude,  $-325.7$   
                                  ----- Latitude, ...  $-131.3$   
                                  ----- Sun's Longitude, .....  $+ 3.9$   
                                  ----- Planet's Heliocentric Longitude,  $-187.6$   
                                  ----- Latitude,  $- 83.0$

*Opposition of Ceres, April 6, 1839.*

Correction of Planet's Geocentric Right Ascension,  $+ 1^{\circ}45'$ : 10 observations, March 21—April 20.  
 ----- Declination, .....  $-20''.3$ : 6 ----- March 21—April 20.  
 ----- Sun's Right Ascension, .....  $+ 0^{\circ}18'$ : 10 ----- March 22—April 20.

Whence                      Correction of Planet's Geocentric Longitude,  $+28.8$   
                                  ----- Latitude, ...  $-10.4$   
                                  ----- Sun's Longitude, .....  $+ 2.9$   
                                  ----- Planet's Heliocentric Longitude,  $+18.7$   
                                  ----- Latitude,  $- 6.6$

*Opposition of Jupiter, April 3, 1839.*

Correction of Planet's Geocentric Right Ascension,  $+ 0^{\circ}61'$ : 11 observations, March 18—April 19.  
 ----- Declination, .....  $-1''.3$ : 9 ----- March 18—April 18.  
 ----- Sun's Right Ascension, .....  $+ 0^{\circ}20'$ : 10 ----- March 19—April 12.

Whence                      Correction of Planet's Geocentric Longitude,  $+8.9$   
                                  ----- Latitude, ...  $+2.3$   
                                  ----- Sun's Longitude, .....  $+3.2$   
                                  ----- Planet's Heliocentric Longitude,  $+7.9$   
                                  ----- Latitude,  $+1.9$

*Opposition of Saturn, May 28, 1839.*

Correction of Planet's Geocentric Right Ascension,  $+ 0^{\circ}52'$ : 11 observations, May 13—June 13.  
 ----- Declination, .....  $+ 17''.1$ : 8 ----- May 13—June 13.  
 ----- Sun's Right Ascension, .....  $+ 0^{\circ}07'$ : 14 ----- May 17—June 13.

Whence                      Correction of Planet's Geocentric Longitude,  $+ 4.4$   
                                  ----- Latitude, ...  $+18.1$   
                                  ----- Sun's Longitude, .....  $+ 1.0$   
                                  ----- Planet's Heliocentric Longitude,  $+ 4.1$   
                                  ----- Latitude,  $+16.3$

*Opposition of Uranus, September 7, 1839.*

Correction of Planet's Geocentric Right Ascension,  $- 5^{\circ}18'$ : 16 observations, Aug. 24—Sept. 23.  
 ----- Declination, .....  $-20''.5$ : 5 ----- Sept. 13—22.  
 ----- Sun's Right Ascension, .....  $+ 0^{\circ}10'$ : 12 ----- Aug. 26—Sept. 23.



Whence	Correction of Planet's Geocentric Longitude, $-79.1$
	Latitude, $+10.9$
	Sun's Longitude, $+1.6$
	Planet's Heliocentric Longitude, $-75.1$
	Latitude, $+10.4$

*Longitude of the Observatory.*

*By Occultations of Stars.*

The Occultations observed during this year, of which corresponding observations have been obtained made at Greenwich and Cambridge, have been calculated according to the method mentioned in the Introduction to the preceding Volume, pp. xxxv-xxxvi. The corrections applied to the sidereal times of the observations at Greenwich and Cambridge, for the mean differences between the Right Ascensions of the Stars employed there for the determination of the times, and the Right Ascensions employed here, are

Greenwich, .....	$-0.05$
Cambridge, .....	$-0.08$

All the observations are of immersions at the Moon's dark limb.

February 23, 1839. Immersion of 47 Geminorum.

Edinburgh, .....	$8^h 50^m 50.2^s$	sidereal time.
Greenwich, .....	$9^h 15^m 6.53^s$	.....
Cambridge, .....	$9^h 13^m 59.70^s$	.....
Apparent Right Ascension of Star, .....	$105^{\circ} 21' 20.55''$	
Declination, .....	$+ 27^{\circ} 7' 0.2''$	
Correction of Nautical Almanac—		
Moon's Right Ascension, .....		$-12.9$
Declination, .....		$+ 0.4$
Difference of Longitude—		
Greenwich and Edinburgh, $12^m 43.37^s$		
Cambridge and Edinburgh, $13^m 5.66^s$		

October 19, 1839. Immersion of 96 Aquarii.

Edinburgh, .....	$21^h 53^m 39.7^s$	sidereal time.
Greenwich, .....	$22^h 4^m 26.66^s$	.....
Cambridge, .....	$22^h 5^m 46.26^s$	.....

Apparent Right Ascension of Star, .....	347 46 40.35
Declination, .....	- 5 59 49.6
Correction of Nautical Almanac—	
Moon's Right Ascension,.....	+ 1.35
Declination, .....	- 4.5
Difference of Longitude—	
Greenwich and Edinburgh, <sup>m.</sup> 12 <sup>s.</sup> 42.02	
Cambridge and Edinburgh, 13 6.21	

The means of these determinations, and of those given in the preceding Volume, are

Difference of Longitude—	
Greenwich and Edinburgh, .....	<sup>m.</sup> 12 <sup>s.</sup> 42.68 : 4 observations.
Cambridge and Edinburgh, .....	13 5.79 : 8 .....

*Reduced observations of the Comet of ENCKE made in November 1838.*

The original observations are given in the preceding Volume.

From the Catalogue of the mean positions of Stars given in this Volume, the apparent places of the Stars, with which the Comet was compared, are computed to be as follows :

Date.	Star.	Apparent Right Ascension.	Apparent Declination.
1838, Nov. 10	<i>a</i>	<sup>h.</sup> 17 <sup>m.</sup> 50 <sup>s.</sup> 2.50	+ 41 30 12.1
12	<i>b</i>	17 20 57.79	34 50 6.3
	<i>c</i>	17 23 41.36	35 4 8.0
	<i>d</i>	17 28 57.77	34 51 37.8
	<i>e</i>	17 26 5.76	34 56 32.7
13	<i>f</i>	17 15 28.85	32 1 26.0
	<i>g</i>	17 16 1.44	32 8 41.4
14	<i>h</i>	17 11 28.04	28 54 36.5
19	<i>i</i>	16 42 38.03	15 39 39.9
	<i>k</i>	16 43 54.00	16 4 22.9

The observed differences of Right Ascension and Declination between the Comet and Stars being applied to the apparent places of the Stars, the apparent places of the Comet are obtained, and the means of the determinations of each day and of the corresponding times are taken, for the result of that day. In taking the means of the observations of Right Ascension, when two Stars have been observed with the Comet, the weight  $1\frac{1}{2}$  is allowed to the result. The Comet's parallaxes are then applied, and the resulting Geocentric positions are compared with the Ephemeris published in *Astronomische Nachrichten*, No. 375. The results are contained in the subjoined Table :

Date.	Sidercal Time.	Parallax in		Comet's Geocentric Right Ascension.	Weight.	Comet's Geocentric Declination.	Weight.	Difference from Ephemeris	
		Right Ascen.	Declin.					Right Ascension.	Declination.
1838,	<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>h. m. s.</i>		<i>° ' "</i>		<i>s.</i>	<i>"</i>
Nov. 10	23 31 54	+1.9	...	17 46 38.1	4	.....	...	-2.4	.....
	0 7 2	...	+25	.....	...	+41 28 9	2	.....	-46
12	23 41 43	1.7	...	17 26 20.7	4½	.....	...	-1.5	.....
	0 15 39	...	27	.....	...	34 58 7	3	.....	+53
13	23 23 12	1.6	...	17 18 1.3	6	.....	...	-0.8	.....
	23 27 2	...	25	.....	...	31 55 15	2	.....	-18
14	23 41 43	1.5	...	17 10 22.2	4	.....	...	-0.8	.....
	0 5 21	...	27	.....	...	28 49 25	1	.....	+8
19	22 21 2	1.1	...	16 42 17.8	4	.....	...	-0.6	.....
	22 33 3	...	23	.....	...	15 50 7	3	.....	+30

The differences from the Ephemeris in Right Ascension being converted into space and multiplied by the cosines of the Declinations, and the mean results, and also the mean differences from the Ephemeris in Declination, and the means of the corresponding times according to the weights being taken, there are obtained the following results, which express the mean corrections of the Ephemeris in Right Ascension reduced to a great circle, and in Declination, deduced from all the observations, the dates being given in mean solar time at Berlin :

Date.	d.	"
Nov.	13.89	-14 : Correction of Ephemeris in Right Ascension.
	14.29	+12 : ..... Declination.

## ERRATA.

## VOL. I. 1834-5.

Page xxvii, line 10, for  $(T) + \tau + n \tan D - c$  ( $\sec D + 1$ ) read  $(T) + \tau - n \tan D - c$  ( $\sec D + 1$ ).

## VOL. IV. 1838.

Page xix, line 12 from bottom, for *a Aquarii* read *α Aquarii*.

..... xxx, line 7, for 0''03 read 0''3.

..... xxxii, line 2, for Horizontal Diameter read Vertical Diameter ; and line 15, for horizontal diameters read vertical diameters.

..... 24, May 8, }  
 ..... 01, column 2, } for γ Libræ read 20 Libræ.  
 ..... 164, No. 1703, }

## VOL. V. 1839.

Page vi, line 19, after This personal equation has not been applied in any instance, insert (except in the observation of Venus on October 15).

..... x, line 9, for *b* sec Latitude read  $(b + 0''.028)$  sec Latitude.

..... xxxii, line 15, Correction of Planet's Heliocentric Longitude, for  $-7''.0$  read  $-7''.1$ .

..... 5, Jan. 11, A. S. C. 373, for 16<sup>m</sup> read 15<sup>m</sup> ; and for 18<sup>m</sup> read 17<sup>m</sup>.

..... 7, Jan. 15, A. S. C. 373, for 17<sup>m</sup> read 16<sup>m</sup> ; and for 18<sup>m</sup> read 17<sup>m</sup>.

..... 35, May 10, Ceres, for  $+5''.18$  read  $+4''.18$ .

..... 38, May 27, Meen I Limb, for 49<sup>m</sup> read 48<sup>m</sup> ; and for 50<sup>m</sup> read 49<sup>m</sup>.

..... 83, Column 4, i Tauri, for Jan. 29 read Jan. 24.

..... 124, Sept. 26, α Ursæ Minoris S. P., delete the mark of reference (*d*).



OBSERVATIONS  
MADE WITH  
THE TRANSIT INSTRUMENT  
IN THE YEAR 1839.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Jan. 1	30 Ceti.....	18.0	31.5	45.2	58.5	12.1	58	45.06	+ 0.98	.....	+ 54.66	0 59 40.70
	♄ <sup>3</sup> Piscium.....	49.8	3.7	17.8	31.8	45.8	0	17.78	+ 0.78	.....	+ 54.66	1 1 13.22
	α Ursæ Minoris.....	.....	.....	.....	7.0	21.5	0	53.85	- 9.23	.....	+ 54.66	1 1 39.28
	χ Piscium.....	24.7	39.0	53.2	7.5	21.5	1	53.18	+ 0.77	.....	+ 54.66	1 2 48.61
	♄ <sup>1</sup> Ceti.....	36.4	49.8	3.4	16.7	30.2	15	3.30	+ 0.96	+ 54.71	+ 54.68	1 15 58.94
	ζ Ceti.....	8.7	22.2	35.7	49.3	2.8	42	35.74	+ 0.97	.....	+ 54.71	1 43 31.42
	7 Arietis.....	29.2	43.6	57.8	12.3	26.7	45	57.92	+ 0.75	.....	+ 54.71	1 46 53.38
	α Arietis.....	42.6	57.1	11.5	25.8	40.3	57	11.46	+ 0.75	54.78	+ 54.73	1 58 6.94
	β Trianguli.....	31.7	47.8	4.0	19.8	35.8	59	3.82	+ 0.67	.....	+ 54.73	1 59 59.22
	γ Trianguli.....	37.2	52.4	7.6	23.1	38.3	2	7.72	+ 0.71	.....	+ 54.73	2 3 3.16
	α Ceti.....	30.7	43.9	57.4	10.7	23.9	52	57.32	+ 0.87	54.75	+ 54.79	2 53 52.98
	♄ <sup>3</sup> Eridani.....	0.5	14.0	27.4	40.8	54.4	55	27.42	+ 0.96	.....	+ 54.79	2 56 23.17
	ζ Eridani.....	39.2	52.7	6.1	19.6	33.0	7	6.12	+ 0.97	.....	+ 54.81	3 8 1.90
	95 Ceti.....	47.1	0.4	13.6	26.8	40.2	9	13.62	+ 0.91	.....	+ 54.81	3 10 9.34
	χ <sup>2</sup> Ceti.....	20.5	33.8	47.0	0.4	13.7	11	47.08	+ 0.88	.....	+ 54.81	3 12 42.77
	A. S. C. 371.....	19.0	45.2	11.0	37.0	3.4	15	11.12	+ 0.37	.....	+ 54.82	3 16 6.31
	σ Persei.....	41.7	1.2	20.8	40.5	0.2	18	20.88	+ 0.55	.....	+ 54.82	3 19 16.25
	17 Eridani.....	16.6	29.8	43.2	56.6	9.8	21	43.20	+ 0.94	.....	+ 54.82	3 22 38.96
	♄ Persei.....	30.6	50.6	10.4	30.0	49.8	24	10.28	+ 0.54	.....	+ 54.82	3 25 5.64
	20 Eridani.....	35.0	48.8	2.7	16.6	30.7	28	2.76	+ 1.03	.....	+ 54.83	3 28 58.62
	21 Eridani.....	43.0	56.4	9.6	23.0	36.4	30	9.68	+ 0.94	.....	+ 54.83	3 31 5.45
	A. S. C. 400.....	48.3	4.0	19.7	35.4	51.1	33	19.70	+ 0.69	.....	+ 54.83	3 34 15.22
	* Pleiad. D. + 23° 14'	22.2	36.6	51.0	5.5	19.9	36	51.04	+ 0.74	.....	+ 54.84	3 37 46.62
	26 Tauri (Pleiadum).....	0.1	14.6	29.1	43.5	58.0	38	29.06	+ 0.74	.....	+ 54.84	3 39 24.64
	31 Tauri.....	4.0	17.4	30.8	44.3	57.6	42	30.82	+ 0.86	.....	+ 54.84	3 43 26.52
	32 Eridani.....	51.4	4.7	17.9	31.0	44.6	45	17.92	+ 0.93	.....	+ 54.85	3 46 13.70
	γ <sup>1</sup> Eridani.....	9.2	22.8	36.6	50.3	4.0	49	36.58	+ 1.00	54.76	+ 54.85	3 50 32.43
	ν Tauri.....	14.6	28.0	41.2	54.6	8.1	53	41.30	+ 0.86	.....	+ 54.85	3 54 37.01
	α Tauri.....	19.2	33.1	46.6	0.5	14.3	25	46.74	+ 0.80	54.95	+ 54.88	4 26 42.42
	δ Orionis.....	25.8	39.2	52.5	5.7	19.0	22	52.44	+ 0.90	54.99	+ 54.94	5 23 48.28
	δ Ursæ Min. S. P.....	24.0	7.0	51.0	.....	.....	22	50.63	+ 5.33	.....	+ 55.00	6 23 50.96
	δ Ursæ Minoris.....	31.5	15.0	57.5	41.5	24.0	22	57.90	- 3.58	.....	+ 55.73	18 23 50.05
Jan. 2	Sun 1 Limb.....	.....	.....	.....	6.5	20.9	47	52.01	+ 1.04	.....	+ 55.76	18 48 48.81
	Sun 2 Limb.....	44.8	.....	14.0	.....	42.8	50	13.86	+ 1.04	.....	+ 55.76	18 51 10.66
	α Aquilæ.....	30.8	44.2	57.6	11.0	24.5	41	57.62	+ 0.82	+ 55.87	+ 55.82	19 42 54.26
	β Aquilæ.....	59.7	13.0	26.4	39.7	53.1	46	26.38	+ 0.84	55.74	+ 55.82	19 47 23.04
	ζ Cygni.....	36.7	51.8	7.2	22.5	37.7	5	7.18	+ 0.69	55.89	+ 55.90	21 6 3.77
	β Aquarii.....	40.4	53.6	6.8	20.3	33.7	22	6.96	+ 0.92	55.92	+ 55.92	21 23 3.80
	α Aquarii.....	6.5	19.7	33.1	46.4	59.7	56	33.08	+ 0.89	55.98	+ 55.95	21 57 29.92
	Uranus.....	37.1	50.5	3.8	17.4	30.7	44	3.90	+ 0.94	.....	+ 56.00	22 45 0.84
	λ Cassiopeæ.....	13.3	35.7	58.0	20.5	42.8	21	58.06	+ 0.46	.....	+ 56.10	0 22 54.62
	55 Piscium.....	2.4	16.4	30.6	44.7	59.0	30	30.62	+ 0.75	.....	+ 56.11	0 31 27.48
	ν Cassiopeæ.....	37.9	2.3	26.8	51.4	15.5	38	26.78	+ 0.41	.....	+ 56.12	0 39 23.31
	66 Piscium.....	39.4	53.4	7.4	21.4	35.4	45	7.40	+ 0.76	.....	+ 56.13	0 46 4.29
	♄ <sup>3</sup> Ceti.....	32.8	46.5	0.4	13.9	27.3	47	0.18	+ 0.96	.....	+ 56.13	0 47 57.27
	25 Ceti.....	30.4	43.8	57.3	10.6	24.0	53	57.22	+ 0.92	.....	+ 56.13	0 54 54.27
	27 Ceti.....	9.1	22.7	36.3	49.8	3.4	56	36.26	+ 0.95	.....	+ 56.14	0 57 33.35
	30 Ceti.....	16.8	30.2	43.6	57.3	10.6	58	43.70	+ 0.95	.....	+ 56.14	0 59 40.79
	♄ <sup>3</sup> Piscium.....	48.3	2.4	16.4	30.5	44.6	0	16.44	+ 0.76	.....	+ 56.14	1 1 13.34
	α Ursæ Minoris.....	.....	37.0	.....	5.0	18.0	0	51.00	- 8.87	.....	+ 56.14	1 1 38.27
	χ Piscium.....	23.5	37.6	51.7	5.8	20.0	1	51.72	+ 0.76	.....	+ 56.14	1 2 48.62
	44 Ceti.....	33.2	46.5	0.1	13.5	26.8	15	0.02	+ 0.94	.....	+ 56.16	1 15 57.12
	33 Arietis.....	51.4	6.3	21.0	35.7	50.4	30	20.96	+ 0.71	.....	+ 56.24	2 31 17.91
	35 Arietis.....	34.9	49.8	4.8	19.7	34.6	33	4.76	+ 0.71	.....	+ 56.24	2 34 1.71
	39 Arietis.....	53.5	8.6	24.1	39.3	54.5	37	24.00	+ 0.70	.....	+ 56.24	2 38 20.94
	τ Persei.....	13.7	35.5	57.2	18.5	40.4	41	57.06	+ 0.49	.....	+ 56.25	2 42 53.80
	γ Persei.....	30.8	52.7	14.8	37.0	59.1	52	14.88	+ 0.47	.....	+ 56.26	2 53 11.61



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpolated.	
Jan. 2	$\rho^3$ Eridani.....	<i>s.</i> 59.4	<i>s.</i> 12.6	<i>s.</i> 26.2	<i>s.</i> 39.6	<i>s.</i> 52.8	<i>m. s.</i> 55 26.12	<i>s.</i> + 0.94	<i>s.</i> .....	<i>s.</i> + 56.26	<i>h. m. s.</i> 2 56 23.32
	95 Ceti.....	45.5	58.8	12.3	25.5	38.8	9 12.18	+ 0.89	.....	+ 56.28	3 10 9.35
	$\kappa^2$ Ceti.....	19.0	32.2	45.6	59.1	12.4	11 45.66	+ 0.86	.....	+ 56.28	3 12 42.80
	Groombridge 642.....	17.0	33.5	50.5	7.0	24.5	13 50.50	- 3.05	.....	+ 56.28	3 14 43.73
	17 Eridani.....	15.0	28.4	41.7	55.3	8.5	21 41.78	+ 0.92	.....	+ 56.29	3 22 38.99
	$\epsilon$ Eridani.....	57.7	11.4	24.8	38.2	51.7	24 24.76	+ 0.95	.....	+ 56.29	3 25 22.00
	21 Eridani.....	41.5	54.8	8.4	21.7	35.1	30 8.30	+ 0.92	.....	+ 56.30	3 31 5.52
	A. S. C. 400.....	47.0	2.7	18.3	33.8	49.4	33 18.24	+ 0.68	.....	+ 56.30	3 34 15.22
	* Pleiad. D. + 23° 14'	20.5	35.2	49.6	4.1	18.5	36 49.58	+ 0.73	.....	+ 56.31	3 37 46.62
	26 Tauri (Pleiad.).....	58.4	13.1	27.7	41.9	56.5	38 27.52	+ 0.73	.....	+ 56.31	3 39 24.56
	31 Tauri.....	2.5	15.8	29.3	42.7	56.1	42 29.28	+ 0.84	.....	+ 56.31	3 43 26.43
	32 Eridani.....	49.8	3.1	16.4	29.7	43.1	45 16.42	+ 0.91	.....	+ 56.32	3 46 13.65
	$\nu$ Tauri.....	12.8	26.3	39.7	53.1	6.4	53 39.66	+ 0.85	.....	+ 56.32	3 54 36.83
	Groombridge 944.....	15.0	50.0	25.5	0.5	36.5	10 25.50	- 2.24	.....	+ 56.40	5 11 19.66
	$\delta$ Ursæ Min. S. P.....	22.0	5.5	48.5	.....	14.0	22 48.38	+ 5.14	.....	+ 56.48	6 23 50.00
	Vesta.....	51.2	5.5	19.8	34.2	48.6	26 19.86	+ 0.73	.....	+ 56.49	6 27 17.08
Jan. 3	$\phi^3$ Ceti.....	31.4	44.7	58.5	12.3	25.9	46 58.56	+ 0.97	.....	+ 57.63	0 47 57.16
	28 Ceti.....	35.4	48.9	2.5	15.7	29.4	57 2.38	+ 0.96	.....	+ 57.64	0 58 0.98
	$\beta$ Andromedæ.....	13.4	29.6	45.7	1.9	18.2	59 45.76	+ 0.66	.....	+ 57.65	1 0 44.07
	$\alpha$ Ursæ Minoris.....	20.5	35.0	.....	2.0	17.0	0 48.70	- 8.86	.....	+ 57.65	.....
	$\theta^1$ Ceti.....	33.1	46.6	0.3	13.8	27.2	15 0.20	+ 0.95	+ 57.80	+ 57.66	1 15 58.81
	$\alpha$ Tauri.....	16.4	30.2	.....	57.7	11.6	25 43.98	+ 0.80	57.71	+ 57.85	4 26 42.63
Jan. 4	$\alpha$ Cygni.....	18.0	36.7	55.5	14.0	32.7	34 55.38	+ 0.49	+ 58.77	+ 58.77	.....
	25 Ceti.....	17.6	40.9	54.4	7.7	21.2	53 54.36	+ 0.86	.....	+ 59.00	0 54 54.22
	28 Ceti.....	33.7	47.3	0.8	14.4	28.1	57 0.86	+ 0.89	.....	+ 59.00	0 58 0.75
	$\eta$ Ceti.....	2.7	16.2	29.8	43.4	57.1	59 29.84	+ 0.89	.....	+ 59.00	1 0 29.73
	$\alpha$ Ursæ Minoris.....	20.0	32.0	.....	1.0	15.0	0 47.08	- 9.31	.....	+ 59.00	.....
	32 Ceti.....	40.8	54.5	7.9	21.3	34.8	1 7.86	+ 0.89	.....	+ 59.00	1 2 7.75
Jan. 5	$\beta$ Aquarii.....	36.2	49.5	2.7	16.2	29.6	22 2.84	+ 0.86	+ 60.10	+ 60.08	21 23 3.78
	$\zeta$ Pegasi.....	57.7	11.0	24.4	37.8	51.2	32 24.42	+ 0.75	60.00	+ 60.14	22 33 25.31
	Vesta.....	27.5	41.8	56.3	10.7	24.9	22 56.24	+ 0.68	.....	+ 60.58	6 23 57.50
	25 Geminorum.....	42.6	57.6	12.7	27.7	42.8	30 12.68	+ 0.63	.....	+ 60.59	6 31 13.90
	28 Geminorum.....	3.0	18.3	33.5	48.7	3.8	33 33.46	+ 0.63	.....	+ 60.59	6 34 34.68
	$\alpha$ Canis Majoris.....	35.4	49.0	3.3	16.8	30.9	37 3.08	+ 0.93	60.68	+ 60.59	6 38 4.60
	36 Geminorum.....	25.5	39.7	53.8	8.2	22.7	40 53.98	+ 0.68	.....	+ 60.59	6 41 55.25
INSTRUMENT REVERSED.											
Jan. 7	64 Piscium.....	0.0	13.7	27.5	41.5	55.4	39 27.62	+ 0.64	.....	+ 63.00	0 40 31.26
	$\phi^2$ Ceti.....	32.7	46.3	59.8	13.5	26.8	40 59.82	+ 0.82	.....	+ 63.00	0 42 3.64
	66 Piscium.....	32.4	46.5	0.5	14.5	28.4	45 0.46	+ 0.62	.....	+ 63.01	0 46 4.09
	$\rho^3$ Ceti.....	26.0	39.7	53.3	6.8	20.4	46 53.24	+ 0.61	.....	+ 63.01	0 47 56.86
	25 Ceti.....	23.5	36.8	50.4	3.7	17.0	53 50.28	+ 0.79	.....	+ 63.01	0 54 54.08
	28 Ceti.....	29.7	43.2	56.7	10.2	23.7	56 56.70	+ 0.82	.....	+ 63.02	0 58 0.54
	$\eta$ Ceti.....	58.6	12.2	25.7	39.3	52.9	59 25.74	+ 0.83	.....	+ 63.02	1 0 29.59
	$\alpha$ Ursæ Minoris.....	.....	36.0	.....	4.0	16.0	0 49.47	- 17.69	.....	+ 63.02	1 1 34.80
	$\tau$ Piscium.....	14.4	29.6	44.8	0.1	15.3	1 44.84	+ 0.52	.....	+ 63.02	1 2 48.38
	71 Ceti.....	20.5	33.8	47.2	0.4	13.7	15 47.12	+ 0.77	.....	+ 63.09	2 16 50.98
	$\gamma$ Ceti.....	28.1	41.4	54.6	7.8	21.2	33 54.62	+ 0.74	+ 63.09	+ 63.11	2 34 58.47
	A. S. C. 299.....	10.7	34.0	57.2	20.6	43.9	37 57.28	+ 0.11	.....	+ 63.11	2 39 0.50
	$\alpha$ Ceti.....	22.3	35.5	49.0	2.4	15.7	52 48.98	+ 0.73	63.18	+ 63.12	2 53 52.83
	95 Ceti.....	38.8	52.2	5.3	18.7	31.8	9 5.36	+ 0.76	.....	+ 63.14	3 10 9.26
	$\kappa^2$ Ceti.....	12.2	25.5	38.7	51.9	5.4	11 38.74	+ 0.73	.....	+ 63.14	3 12 42.61
	Groombridge 642.....	12.5	29.0	45.0	1.5	18.0	13 45.20	- 6.50	.....	+ 63.14	3 14 41.84



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.	
		I.	II.	III.	IV.	V.			observed.	interpo- lated.		
Jan. 7	$\epsilon$ Eridani.....	51.0	4.3	17.8	31.4	44.8	24	17.86	+ 0.82	.....	+ 63.15	<i>h. m. s.</i> 3 25 21.83
	20 Eridani .....	26.4	40.5	54.6	8.5	22.7	27	54.54	+ 0.86	.....	+ 63.16	3 28 58.56
	21 Eridani .....	34.6	48.2	1.5	14.9	28.3	30	1.50	+ 0.79	.....	+ 63.16	3 31 5.45
	22 Eridani .....	10.7	24.0	37.4	50.7	4.1	31	37.38	+ 0.79	.....	+ 63.16	3 32 41.33
	$\delta$ Eridani .....	2.4	15.8	29.4	43.0	56.3	34	29.38	+ 0.82	.....	+ 63.16	3 35 33.36
	* Pleiad. D. + 23° 14'	13.6	28.3	42.8	57.3	11.7	36	42.74	+ 0.58	.....	+ 63.17	3 37 46.49
	26 Tauri (Pleiad.) ....	51.9	6.3	20.7	35.3	49.7	38	20.78	+ 0.58	.....	+ 63.17	3 39 24.53
	31 Tauri.....	55.8	9.2	22.5	35.8	49.3	42	22.52	+ 0.71	.....	+ 63.17	3 43 26.40
	32 Eridani.....	42.9	56.4	9.7	23.0	36.3	45	9.66	+ 0.77	.....	+ 63.18	3 46 13.61
	$\gamma^1$ Eridani.....	0.8	14.7	28.3	42.0	55.5	49	28.26	+ 0.83	+ 63.21	+ 63.18	3 50 32.27
	35 Eridani.....	53.3	6.6	19.7	33.2	46.5	52	19.86	+ 0.77	.....	+ 63.19	3 53 23.82
	37 Eridani.....	1.7	15.2	28.4	42.1	55.5	1	28.58	+ 0.80	.....	+ 63.19	4 2 32.57
	66 Tauri.....	35.6	49.4	2.7	16.2	29.7	14	2.72	+ 0.69	.....	+ 63.20	4 15 6.61
	44 Eridani.....	43.7	57.0	10.2	23.5	36.8	19	10.24	+ 0.74	.....	+ 63.21	4 20 14.19
	$\alpha$ Tauri.....	11.2	24.9	38.4	52.4	6.3	25	38.64	+ 0.64	63.20	+ 63.22	4 26 42.50
	49 Eridani.....	26.7	40.0	53.4	6.6	19.8	27	53.30	+ 0.74	.....	+ 63.22	4 28 57.26
	$\mu$ Eridani .....	57.7	11.0	24.4	37.7	51.0	36	24.36	+ 0.77	.....	+ 63.23	4 37 28.36
	58 Eridani.....	52.2	5.8	19.8	33.8	47.8	39	19.88	+ 0.87	.....	+ 63.23	4 40 23.98
	$\pi^2$ Orionis.....	32.4	46.0	59.6	13.2	26.6	44	59.56	+ 0.68	.....	+ 63.23	4 46 3.47
	10 Orionis.....	43.0	56.4	9.7	23.0	36.2	49	9.66	+ 0.74	.....	+ 63.24	4 50 13.64
	$\eta$ Aurigæ.....	36.8	54.4	12.0	29.5	47.2	54	11.98	+ 0.37	.....	+ 63.24	4 55 15.59
	$\beta$ Eridani.....	26.7	40.0	53.7	6.5	20.2	58	53.42	+ 0.79	.....	+ 63.25	4 59 57.46
	$\alpha$ Aurigæ.....	8.6	27.6	46.5	5.4	24.6	3	46.54	+ 0.30	63.23	+ 63.25	5 4 50.09
	* D. + 27° 41'.....	23.3	38.3	53.1	8.0	23.2	30	53.18	+ 0.54	.....	+ 63.28	5 31 57.00
	* D. + 27° 39'.....	41.7	56.6	11.8	26.8	41.7	33	11.72	+ 0.54	.....	+ 63.28	5 34 15.54
	Vesta.....	13.8	28.3	42.7	57.2	11.5	20	42.70	+ 0.58	.....	+ 63.32	6 21 46.60
	$\delta$ Ursæ Min. S. P. ....	12.0	55.0	38.0	22.0	6.0	22	38.60	+ 9.25	.....	+ 63.32	6 23 51.17
	$\downarrow$ Virginis.....	27.8	41.3	54.8	8.3	21.7	44	54.78	+ 0.84	.....	+ 63.68	12 45 59.30
	$\alpha$ Ursæ Min. S. P. ....	.....	58.0	.....	23.0	.....	0	10.65	+ 20.21	.....	+ 63.69	13 1 34.55
$\theta$ Virginis.....	6.2	19.5	32.7	45.9	59.4	0	32.74	+ 0.81	.....	+ 63.69	13 1 37.24	
Jupiter 1 Limb.....	49.7	.....	16.4	.....	43.1	6	16.40	+ 0.82	.....	+ 63.70	13 7 20.92	
Jupiter 2 Limb.....	.....	5.6	.....	32.3	.....	6	18.95	+ 0.82	.....	+ 63.70	13 7 23.47	
(a) Moon 1 Limb.....	51.7	5.3	19.2	32.9	46.7	14	19.16	+ 0.87	.....	+ 63.70	13 15 23.73	
Moon 2 Limb.....	55.4	9.5	23.3	37.0	50.7	16	23.18	+ 0.87	.....	+ 63.70	13 17 27.75	
82 Virginis.....	38.6	52.1	5.5	18.7	32.3	32	5.44	+ 0.83	.....	+ 63.72	13 33 9.99	
89 Virginis.....	35.4	49.2	3.1	17.1	31.0	40	3.16	+ 0.90	.....	+ 63.73	13 41 7.79	
Jan. 8	Sun 1 Limb.....	36.3	51.0	5.5	19.8	34.0	14	5.32	+ 0.93	.....	+ 64.03	19 15 10.28
	Sun 2 Limb.....	57.7	12.3	26.6	41.0	55.4	16	26.60	+ 0.93	.....	+ 64.03	19 17 31.56
	$\alpha$ Aquilæ.....	22.7	36.1	49.5	3.0	16.5	41	49.56	+ 0.72	+ 64.08	+ 64.07	19 42 54.35
	$\alpha$ Cygni.....	12.7	31.5	50.3	8.8	27.6	34	50.18	+ 0.34	64.10	+ 64.11	20 35 54.63
	$\zeta$ Cygni.....	28.5	43.7	59.3	14.5	29.6	4	59.12	+ 0.53	64.09	+ 64.13	21 6 3.78
	$\zeta$ Pegasi.....	53.2	6.7	20.3	33.7	47.3	32	20.24	+ 0.71	64.20	+ 64.24	22 33 25.19
	$\alpha$ Pegasi.....	11.5	25.3	39.0	52.7	6.4	55	38.98	+ 0.68	64.29	+ 64.26	22 56 43.92
	22 Eridani.....	9.0	22.4	35.8	49.2	2.4	31	35.76	+ 0.82	.....	+ 64.60	3 32 41.18
	29 Tauri.....	36.3	49.6	2.8	16.3	29.5	36	2.90	+ 0.74	.....	+ 64.60	3 37 8.24
	Piazzi III. 165.....	51.3	6.1	20.5	34.8	49.3	39	20.40	+ 0.61	.....	+ 64.61	3 40 25.62
	$\epsilon$ Persei.....	25.4	42.6	0.1	17.4	34.6	46	0.02	+ 0.41	.....	+ 64.61	3 47 5.04
	37 Eridani.....	0.1	13.6	27.0	40.5	53.7	1	26.98	+ 0.84	.....	+ 64.63	4 2 32.45
	46 Tauri.....	22.0	35.5	48.8	2.4	15.8	3	48.90	+ 0.72	.....	+ 64.64	4 4 54.26
	39 Eridani.....	12.8	26.1	39.7	53.3	6.7	5	39.72	+ 0.86	.....	+ 64.64	4 6 45.22
	66 Tauri.....	34.2	47.6	1.2	14.6	28.0	14	1.12	+ 0.72	.....	+ 64.65	4 15 6.49
	44 Eridani.....	42.3	55.5	8.6	22.1	35.3	19	8.76	+ 0.77	.....	+ 64.66	4 20 14.19
	49 Eridani.....	25.0	38.4	51.7	5.0	18.4	27	51.70	+ 0.77	.....	+ 64.67	4 28 57.14
	$\mu$ Eridani.....	56.3	9.5	22.8	36.3	49.6	36	22.90	+ 0.80	.....	+ 64.68	4 37 28.38
	58 Eridani.....	50.5	4.3	18.2	32.2	46.1	39	18.26	+ 0.90	.....	+ 64.68	4 40 23.84
	$\pi^1$ Orionis.....	19.4	32.7	46.2	59.7	13.2	40	46.24	+ 0.72	.....	+ 64.68	4 41 51.64
	$\pi^2$ Orionis.....	30.8	44.4	58.0	11.6	25.1	44	57.98	+ 0.71	.....	+ 64.69	4 46 3.38

(a) Dark Limb.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Jan. 8	$\eta$ Aurigæ .....	35.2	52.7	10.5	28.0	45.6	54	10.40	+ 0.39	.....	+ 64.70	h. m. s. 4 55 15.49
	$\beta$ Eridani .....	25.2	38.5	51.8	5.1	18.5	58	51.82	+ 0.82	.....	+ 64.71	4 59 57.35
	* D + 27° 41' .....	21.7	36.6	51.6	6.6	21.6	30	51.62	+ 0.56	.....	+ 64.75	5 31 56.93
	* D + 27° 39' .....	40.2	55.3	10.2	25.2	40.1	33	10.20	+ 0.56	.....	+ 64.75	5 34 15.51
	Vesta .....	8.0	22.4	36.5	51.1	5.4	19	36.68	+ 0.60	.....	+ 64.80	6 20 42.08
	$\delta$ Ursæ Min. S. P. ....	9.5	.....	36.5	19.0	2.5	22	36.02	+ 9.62	.....	+ 64.81	6 23 50.45
	89 Virginis .....	33.7	47.7	1.5	15.3	29.3	40	1.50	+ 1.00	.....	+ 65.34	13 41 7.84
	(a) Moon 1 Limb .....	5.0	19.5	33.5	48.0	2.0	59	33.60	+ 1.02	.....	+ 65.36	14 0 39.98
	Moon 2 Limb .....	12.6	26.8	41.0	55.2	9.4	1	41.00	+ 1.02	.....	+ 65.36	14 2 47.38
	$\alpha^2$ Libræ .....	24.4	38.2	52.2	5.8	19.5	40	52.02	+ 0.98	+ 65.44	+ 65.41	14 41 58.41
	$\delta$ Ursæ Minoris .....	28.0	11.0	54.0	37.0	20.5	22	54.10	- 8.74	.....	+ 65.68	18 23 51.04
Jan. 9	Sun 1 Limb .....	56.6	11.3	25.8	40.2	54.5	18	25.68	+ 1.04	.....	+ 65.75	19 19 32.47
	Sun 2 Limb .....	18.0	32.3	46.7	1.1	15.5	20	46.72	+ 1.04	.....	+ 65.75	19 21 53.51
	Venus 1 Limb .....	13.1	27.4	41.8	56.3	10.8	42	41.88	+ 1.04	.....	+ 65.78	19 43 48.70
	$\alpha$ Cygni .....	11.0	29.7	48.5	7.2	25.8	34	48.44	+ 0.36	65.82	+ 65.84	20 35 54.64
	$\zeta$ Cygni .....	26.8	41.8	57.4	12.5	27.7	4	57.24	+ 0.58	65.92	+ 65.88	21 6 3.70
	$\epsilon$ Pegasi .....	41.8	55.4	9.0	22.6	35.8	35	8.92	+ 0.79	65.93	+ 65.92	21 36 15.63
	$\zeta$ Pegasi .....	51.6	4.9	18.6	32.1	45.5	32	18.54	+ 0.78	65.82	+ 66.00	22 33 25.32
	$\alpha$ Pegasi .....	9.8	23.3	37.1	50.7	4.5	55	37.08	+ 0.74	66.12	+ 66.03	22 56 43.85
	66 Piscium .....	29.0	43.1	56.7	10.7	25.0	44	56.90	+ 0.71	.....	+ 66.17	0 46 3.78
	$\alpha$ Ursæ Minoris .....	.....	34.0	.....	1.0	13.0	0	46.77	- 20.55	.....	+ 66.20	1 1 32.42
	$\tau$ Piscium .....	11.0	26.3	41.5	56.7	12.0	1	41.50	+ 0.59	.....	+ 66.20	1 2 48.29
	$\delta$ Cassiopeæ .....	21.1	47.3	13.6	39.7	5.7	14	13.48	- 0.03	.....	+ 66.22	1 15 19.67
	50 Ceti .....	33.2	47.2	1.0	14.8	28.6	27	0.96	+ 0.99	.....	+ 66.24	1 28 8.19
	$\alpha$ Trianguli .....	18.1	33.2	48.3	3.5	18.6	42	48.34	+ 0.59	.....	+ 66.26	1 43 55.19
	7 Arietis .....	17.6	32.0	46.3	0.7	15.1	45	46.34	+ 0.66	.....	+ 66.26	1 46 53.26
	A. S. C. 226 .....	59.8	14.5	29.2	43.8	58.6	56	29.18	+ 0.63	.....	+ 66.27	1 57 36.08
	$\beta$ Trianguli .....	20.2	36.3	52.4	8.6	24.5	58	52.40	+ 0.53	.....	+ 66.28	1 59 59.21
	$\delta$ Ursæ Minoris .....	26.0	.....	51.0	.....	.....	22	51.75	- 8.43	.....	+ 67.59	.....
Jan. 10	$\alpha$ Cygni .....	9.1	27.7	46.8	5.5	24.2	34	46.66	+ 0.36	+ 67.59	+ 67.76	20.35 54.78
	A. S. C. 359 .....	58.2	13.3	28.4	43.5	58.6	9	28.40	+ 0.59	.....	+ 68.29	3 10 37.28
	A. S. C. 371 .....	5.5	31.4	57.3	23.3	49.2	14	57.34	- 0.01	.....	+ 68.30	3 16 5.63
	$\psi$ Persei .....	16.8	36.6	56.6	16.5	36.2	23	56.54	+ 0.31	.....	+ 68.31	3 25 5.16
	10 Tauri .....	4.7	18.1	31.4	44.6	57.7	27	31.30	+ 0.84	.....	+ 68.31	3 28 40.45
	46 Tauri .....	18.0	31.6	44.8	58.5	11.8	3	44.94	+ 0.78	.....	+ 68.35	4 4 54.07
	66 Tauri .....	30.5	43.7	57.3	10.6	24.2	13	57.26	+ 0.77	.....	+ 68.37	4 15 6.40
	45 Eridani .....	3.9	17.4	30.6	43.8	57.2	22	30.58	+ 0.84	.....	+ 68.38	4 23 39.80
	$\alpha$ Tauri .....	5.7	19.5	33.3	47.0	1.0	25	33.30	+ 0.71	68.46	+ 68.38	4 26 42.39
	$\mu$ Eridani .....	52.5	5.8	19.2	32.5	45.8	36	19.16	+ 0.86	.....	+ 68.39	4 37 28.41
	$\pi^1$ Orionis .....	15.6	29.0	42.5	56.1	9.4	40	42.52	+ 0.78	.....	+ 68.40	4 41 51.70
	$\pi^2$ Orionis .....	27.3	40.7	54.3	7.7	21.2	44	54.24	+ 0.76	.....	+ 68.40	4 46 3.40
	$\alpha$ Aurigæ .....	3.1	22.2	41.2	0.3	19.4	3	41.24	+ 0.33	68.50	+ 68.43	5 4 50.00
	$\beta$ Orionis .....	13.3	26.6	40.0	53.4	7.0	5	40.06	+ 0.90	68.52	+ 68.43	5 6 49.39
	$\beta$ Tauri .....	29.4	44.5	59.5	14.6	29.7	14	59.54	+ 0.59	68.45	+ 68.44	5 16 8.57
Jan. 11	$\eta$ Ceti .....	51.7	5.3	18.9	32.5	46.2	59	18.92	+ 0.95	.....	+ 69.87	1 0 29.74
	$\alpha$ Ursæ Minoris .....	.....	28.0	40.0	53.0	6.0	0	39.90	- 17.57	.....	+ 69.87	1 1 32.20
	$\delta$ Cassiopeæ .....	17.8	44.0	9.6	35.7	2.0	14	9.82	+ 0.12	.....	+ 69.89	1 15 19.83
	50 Ceti .....	29.6	43.5	57.4	11.3	25.2	26	57.40	+ 0.98	.....	+ 69.90	1 28 8.28
	A. S. C. 179 .....	57.4	10.8	24.5	38.0	51.5	28	24.44	+ 0.95	.....	+ 69.90	1 29 35.29
	$\zeta$ Ceti .....	53.4	7.0	20.5	34.0	47.6	42	20.50	+ 0.93	.....	+ 69.92	1 43 31.37
	$\alpha$ Arietis .....	27.5	41.8	56.5	10.6	25.2	56	56.32	+ 0.70	+ 69.86	+ 69.94	1 58 6.96
	$\beta$ Trianguli .....	16.6	32.7	48.7	4.7	20.8	58	48.70	+ 0.59	.....	+ 69.94	1 59 59.23
	$\epsilon^3$ Eridani .....	45.6	59.0	12.3	25.6	39.0	55	12.30	+ 0.92	.....	+ 70.00	2 56 23.22
	A. S. C. 359 .....	56.6	11.5	26.7	42.0	57.2	9	26.80	+ 0.65	.....	+ 70.02	3 10 37.47
	A. S. C. 373 .....	6.8	32.3	57.2	22.7	47.8	16	57.36	+ 0.14	.....	+ 70.03	3 18 7.53
(a) Dark Limb.												



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Jan. 11	↓ Persei .....	15.6	35.4	55.2	14.7	34.6	23	55.10	+ 0.40	.....	+ 70.04	3	25	5.54
	10 Tauri .....	3.1	16.5	29.8	42.8	56.4	27	29.72	+ 0.87	.....	+ 70.04	3	28	40.63
	Groomb. 2283 S. P. ....	18.0	8.0	58.5	49.0	38.5	30	58.40	+ 14.21	.....	+ 70.05	3	32	22.66
	δ Eridani .....	55.3	8.8	22.3	35.6	49.3	34	22.26	+ 0.94	.....	+ 70.06	3	35	33.26
	Piazzi III. 165 .....	46.2	0.6	15.2	29.6	44.0	39	15.12	+ 0.69	.....	+ 70.06	3	40	25.87
	γ <sup>1</sup> Eridani .....	54.0	7.6	21.2	34.8	48.7	49	21.26	+ 0.95	+ 70.06	+ 70.08	3	50	32.29
	35 Eridani .....	46.4	59.5	12.8	26.2	39.4	52	12.86	+ 0.89	.....	+ 70.08	3	53	23.83
	37 Eridani .....	54.6	8.2	21.6	34.9	48.4	1	21.54	+ 0.92	.....	+ 70.09	4	2	32.55
	46 Tauri .....	16.6	30.1	43.4	56.8	10.4	3	43.46	+ 0.82	.....	+ 70.09	4	4	54.37
	39 Eridani .....	7.4	20.8	34.5	47.7	1.4	5	34.36	+ 0.94	.....	+ 70.10	4	6	45.40
	44 Eridani .....	36.6	50.0	3.4	16.6	29.8	19	3.28	+ 0.86	.....	+ 70.12	4	20	14.26
	45 Eridani .....	2.4	15.6	28.8	42.1	55.6	22	28.90	+ 0.87	.....	+ 70.12	4	23	39.89
	A. S. C. 526 .....	47.4	1.0	14.4	27.8	41.2	25	14.36	+ 0.92	.....	+ 70.13	4	26	25.41
	49 Eridani .....	19.7	33.0	46.3	59.6	12.8	27	46.28	+ 0.86	.....	+ 70.13	4	28	57.27
	A. S. C. 547 .....	54.0	7.5	21.1	34.5	48.0	34	21.02	+ 0.79	.....	+ 70.13	4	35	31.94
	π <sup>1</sup> Orionis .....	13.9	27.4	40.8	54.3	7.8	40	40.84	+ 0.81	.....	+ 70.14	4	41	51.79
	6 Orionis .....	14.6	28.2	41.6	55.3	8.7	44	41.68	+ 0.79	.....	+ 70.14	4	45	52.61
	ω Aurigæ .....	37.4	54.4	11.1	27.8	44.4	47	11.02	+ 0.54	.....	+ 70.15	4	48	21.71
	63 Eridani .....	36.6	50.2	3.8	17.2	30.8	51	3.72	+ 0.94	.....	+ 70.15	4	52	14.81
	η Aurigæ .....	29.8	47.4	5.2	22.5	40.4	54	5.06	+ 0.49	.....	+ 70.15	4	55	15.70
	β Eridani .....	19.8	33.2	46.5	59.8	13.1	58	46.48	+ 0.91	.....	+ 70.16	4	59	57.55
	α Aurigæ .....	1.2	20.4	39.6	58.5	17.5	3	39.44	+ 0.42	70.21	+ 70.16	5	4	50.02
	β Orionis .....	11.5	25.1	38.4	51.8	5.2	5	38.40	+ 0.92	70.16	+ 70.17	5	6	49.49
	7 Tauri .....	27.5	42.5	57.7	12.8	27.8	14	57.66	+ 0.65	70.27	+ 70.17	5	16	8.48
	* D. + 27° 41' .....	15.9	31.3	46.1	1.1	16.0	30	46.08	+ 0.66	.....	+ 70.19	5	31	56.93
	* D. + 27° 39' .....	34.7	50.0	4.7	19.8	34.8	33	4.80	+ 0.66	.....	+ 70.19	5	34	15.65
	Vesta .....	54.4	8.8	23.1	37.5	52.0	16	23.16	+ 0.70	.....	+ 70.24	6	17	34.10
	δ Ursæ Min. S. P. ....	.....	48.5	32.0	15.5	59.0	22	32.15	+ 9.37	.....	+ 70.24	6	23	51.76
	24 Ursæ Min. S. P. ....	8.0	19.0	29.5	41.0	51.5	28	29.80	+ 10.43	.....	+ 70.25	6	29	50.48
	δ Ursæ Minoris .....	20.5	4.0	47.0	30.0	.....	22	46.98	- 7.08	.....	+ 70.98	18	23	50.88
Jan. 12	Sun 2 Limb .....	15.2	29.6	43.8	58.2	12.6	33	43.88	+ 0.81	.....	+ 71.06	19	34	55.75
	Venus 1 Limb .....	.....	26.7	40.9	55.6	9.6	58	41.03	+ 0.81	.....	+ 71.08	19	59	52.92
	α Cygni .....	5.6	24.6	43.4	1.9	20.6	34	43.22	+ 0.28	+ 71.11	+ 71.12	20	35	54.62
	ζ Cygni .....	21.6	36.8	52.1	7.4	22.7	4	52.12	+ 0.46	71.15	+ 71.15	21	6	3.73
	ε Pegasi .....	36.8	50.4	3.8	17.3	30.8	35	3.82	+ 0.63	71.18	+ 71.18	21	36	15.63
	64 Piscium .....	51.4	5.3	19.0	32.7	46.5	39	18.98	+ 0.58	.....	+ 71.36	0	40	30.92
	φ <sup>2</sup> Ceti .....	24.0	37.6	51.3	4.9	18.5	40	51.26	+ 0.75	.....	+ 71.36	0	42	3.37
	36 Andromedæ .....	40.4	54.8	9.4	23.5	38.2	45	9.26	+ 0.52	.....	+ 71.37	0	46	21.15
	β Andromedæ .....	59.4	15.6	32.0	48.2	4.4	59	31.92	+ 0.41	.....	+ 71.38	1	0	43.71
	α Ursæ Minoris .....	.....	23.0	.....	49.0	2.5	0	35.60	- 16.65	.....	+ 71.38	1	1	30.33
	τ Piscium .....	6.0	21.2	36.4	51.5	6.7	1	36.36	+ 0.47	.....	+ 71.38	1	2	48.21
	50 Ceti .....	28.2	42.1	55.8	9.7	23.6	26	55.88	+ 0.78	.....	+ 71.41	1	28	8.07
	A. S. C. 179 .....	56.0	9.5	23.0	36.5	50.0	28	23.00	+ 0.75	.....	+ 71.41	1	29	35.16
	ζ Ceti .....	51.6	5.5	18.9	32.4	46.0	42	18.88	+ 0.75	.....	+ 71.42	1	43	31.05
Jan. 13	ε <sup>2</sup> Eridani .....	10.1	23.6	36.8	50.2	3.6	53	36.86	+ 0.73	.....	+ 71.49	2	54	49.08
	Groombridge 642 .....	1.5	17.5	34.5	51.0	9.0	13	34.70	- 6.12	.....	+ 71.51	3	14	40.09
	Groomb. 2283 S. P. ....	15.5	8.0	59.0	47.0	36.0	30	57.10	+ 13.22	.....	+ 71.53	3	32	21.85
Jan. 14	δ Ursæ Minoris .....	17.0	0.0	44.0	27.0	.....	22	43.58	- 6.62	.....	+ 73.83	18	23	50.79
	α Lyræ .....	39.4	56.6	13.6	30.6	47.7	30	13.58	+ 0.35	+ 73.71	+ 73.83	18	31	27.76
	β Lyræ .....	21.7	36.7	52.6	8.5	23.5	42	52.60	+ 0.41	73.66	+ 73.85	18	44	6.86
Jan. 14	Sun 1 Limb .....	30.8	45.2	59.5	13.8	28.1	39	59.48	+ 0.75	.....	+ 73.90	19	41	14.13
	Sun 2 Limb .....	51.0	5.3	19.6	34.0	48.2	42	19.62	+ 0.75	.....	+ 73.90	19	43	34.27
	β Ceti .....	47.0	1.2	15.2	29.3	43.4	34	15.22	+ 0.74	74.38	+ 74.19	0	35	30.15
	φ <sup>2</sup> Ceti .....	21.5	35.1	48.6	2.2	15.6	40	48.60	+ 0.70	.....	+ 74.20	0	42	3.50
	36 Andromedæ .....	37.7	52.3	6.6	20.8	35.4	45	6.56	+ 0.50	.....	+ 74.20	0	46	21.26



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Jan. 14	$\alpha$ Ursæ Minoris .....	s. 18.5	s. 31.0	s. 43.0	s. ....	s. 0	m. 30.83	s. -15.57	.....	s. +74.22	s. ....	h. m. s. 1 1 29.48
	46 Ceti .....	59.7	13.6	27.4	41.2	55.0	16 27.38	+ 0.72	.....	+74.23	.....	1 17 42.33
	$\epsilon^1$ Eridani .....	34.2	47.6	1.1	14.4	27.8	52 1.02	+ 0.68	.....	+74.32	.....	2 53 16.02
	$\epsilon^2$ Eridani .....	7.2	20.6	34.1	47.4	0.9	53 34.04	+ 0.68	.....	+74.32	.....	2 54 49.04
	A. S. C. 359 .....	52.5	7.7	22.7	37.7	52.8	9 22.68	+ 0.45	.....	+74.34	.....	3 10 37.47
	A. S. C. 371 .....	59.6	25.6	51.8	17.9	43.8	14 51.74	- 0.01	.....	+74.34	.....	3 16 6.07
	$\sigma$ Persei .....	22.0	41.8	1.5	20.9	40.7	18 1.38	+ 0.23	.....	+74.35	.....	3 19 15.96
	22 Eridani .....	59.4	12.8	26.1	39.5	52.8	31 26.12	+ 0.67	.....	+74.36	.....	3 32 41.15
	A. S. C. 407 .....	11.5	25.0	38.4	52.0	5.6	34 38.50	+ 0.71	.....	+74.36	.....	3 35 53.57
	$\eta$ Tauri .....	12.6	27.0	41.5	55.8	10.5	36 41.48	+ 0.49	+74.39	+74.36	.....	3 37 56.33
	$\gamma^1$ Eridani .....	49.7	3.4	17.1	30.8	44.6	49 17.12	+ 0.71	74.41	+74.37	.....	3 50 32.20
	39 Eridani .....	3.2	16.8	30.4	43.7	57.3	5 30.28	+ 0.70	.....	+74.39	.....	4 6 45.37
	45 Eridani .....	58.2	11.5	24.7	38.0	51.3	22 24.74	+ 0.64	.....	+74.40	.....	4 23 39.78
	A. S. C. 526 .....	43.6	56.8	10.2	23.6	37.0	25 10.24	+ 0.69	.....	+74.41	.....	4 26 25.34
	51 Eridani .....	49.6	2.8	16.2	29.6	42.8	28 16.20	+ 0.65	.....	+74.41	.....	4 29 31.26
	58 Eridani .....	41.0	54.9	8.8	22.6	36.5	39 8.76	+ 0.74	.....	+74.42	.....	4 40 23.92
	3 Orionis .....	57.5	10.8	24.3	37.5	50.8	41 24.18	+ 0.61	.....	+74.42	.....	4 42 39.21
	6 Orionis .....	10.4	24.0	37.5	50.8	4.4	44 37.42	+ 0.57	.....	+74.42	.....	4 45 52.41
	$\omega$ Aurigæ .....	33.3	50.1	6.8	23.5	40.4	47 6.82	+ 0.36	.....	+74.43	.....	4 48 21.61
	10 Orionis .....	31.6	45.1	58.5	11.8	25.1	48 58.42	+ 0.63	.....	+74.43	.....	4 50 13.48
	63 Eridani .....	32.5	45.8	59.3	12.9	26.4	50 59.38	+ 0.70	.....	+74.43	.....	4 52 14.51
	14 Orionis .....	26.4	40.0	53.4	6.8	20.3	57 53.38	+ 0.60	.....	+74.44	.....	4 59 8.42
	$\alpha$ Aurigæ .....	57.3	16.2	35.3	54.4	13.4	3 35.32	+ 0.26	74.47	+74.44	.....	5 4 50.02
	$\beta$ Orionis .....	7.4	20.9	34.2	47.7	1.2	5 34.28	+ 0.69	74.50	+74.44	.....	5 6 49.41
	* D. + 27° 41' .....	12.0	27.2	42.0	57.1	12.1	30 42.08	+ 0.46	.....	+74.47	.....	5 31 57.01
	* D. + 27° 39' .....	30.6	45.7	0.7	15.5	30.6	33 0.62	+ 0.46	.....	+74.47	.....	5 34 15.55
	Vesta .....	51.1	5.5	19.8	34.1	48.6	13 19.82	+ 0.49	.....	+74.50	.....	6 14 34.81
	$\delta$ Ursæ Min. S. P. ....	1.5	45.0	28.5	12.0	54.5	22 28.30	+ 8.14	.....	+74.51	.....	6 23 50.95
	24 Ursæ Min. S. P. ....	3.0	14.0	26.0	36.0	47.0	28 25.20	+ 9.06	.....	+74.51	.....	6 29 48.77
Jan. 15	Sun 1 Limb .....	48.1	2.3	16.5	30.8	45.1	44 16.56	+ 0.88	.....	+75.25	.....	19 45 32.69
	Sun 2 Limb .....	8.0	22.2	36.6	50.8	5.1	46 36.54	+ 0.88	.....	+75.25	.....	19 47 52.67
	$\alpha$ Cygni .....	1.5	20.5	39.3	57.8	16.4	34 39.10	+ 0.32	+75.19	+75.30	.....	20 35 54.72
	(a) $\zeta$ Cygni .....	17.4	32.6	47.8	3.2	18.5	5 47.90	+ 0.51	15.32	+15.32	.....	21 6 3.73
	$\alpha$ Aquarii .....	47.2	0.6	13.8	27.1	40.4	57 13.82	+ 0.75	15.34	+15.37	.....	21 57 29.94
	$\zeta$ Pegasi .....	42.2	55.7	9.2	22.6	36.0	33 9.14	+ 0.67	15.30	+15.41	.....	22 33 25.22
	$\alpha$ Pegasi .....	0.5	14.3	28.0	41.6	55.3	56 27.94	+ 0.64	15.32	+15.43	.....	22 56 44.01
	$\beta$ Ceti .....	45.6	59.6	13.5	27.6	41.6	35 13.58	+ 0.86	15.89	+15.54	.....	0 35 29.98
	67 Piscium .....	33.5	48.2	3.2	17.8	32.7	47 3.08	+ 0.53	.....	+15.55	.....	0 47 19.16
	$\alpha$ Ursæ Minoris .....	.....	18.0	30.0	42.5	.....	1 30.17	-17.70	.....	+15.56	.....	1 1 28.03
	46 Ceti .....	58.4	12.2	26.0	39.6	53.5	17 25.94	+ 0.82	.....	+15.58	.....	1 17 42.34
	$\epsilon^2$ Eridani .....	5.9	19.2	32.6	46.0	59.4	54 32.62	+ 0.79	.....	+15.67	.....	2 54 49.08
	$\kappa^1$ Ceti .....	13.1	26.4	39.7	53.0	6.2	10 39.68	+ 0.73	.....	+15.69	.....	3 10 56.10
	A. S. C. 373 .....	1.0	26.4	51.6	17.2	42.4	17 51.72	+ 0.02	.....	+15.70	.....	3 18 7.44
	$\delta$ Persei .....	35.2	54.5	14.2	33.7	53.2	31 14.16	+ 0.27	.....	+15.72	.....	3 31 30.15
	A. S. C. 407 .....	10.4	23.9	37.2	50.5	4.0	35 37.20	+ 0.82	.....	+15.72	.....	3 35 53.74
	Piazzi III. 165 .....	40.4	55.0	9.4	23.8	38.4	40 9.40	+ 0.56	.....	+15.73	.....	3 40 25.69
	Groombridge 750 .....	46.0	22.0	58.0	34.5	10.0	47 58.10	- 4.99	.....	+15.74	.....	3 48 8.85
	A. S. C. 526 .....	42.0	55.3	8.7	22.2	35.5	26 8.74	+ 0.79	.....	+15.78	.....	4 26 25.31
	51 Eridani .....	48.0	1.4	14.5	28.0	41.2	29 14.62	+ 0.75	.....	+15.78	.....	4 29 31.15
	A. S. C. 547 .....	48.4	1.8	15.4	28.8	42.3	35 15.34	+ 0.67	.....	+15.79	.....	4 35 31.80
	A. S. C. 552 .....	46.5	19.3	52.2	24.6	57.6	37 52.04	- 0.30	.....	+15.79	.....	4 38 7.53
	1 Orionis .....	24.1	37.4	50.7	4.2	17.6	40 50.80	+ 0.69	.....	+15.79	.....	4 41 7.28
	3 Orionis .....	56.1	9.3	22.6	36.0	49.5	43 22.70	+ 0.70	.....	+15.79	.....	4 43 39.19
	6 Orionis .....	8.8	22.5	35.8	49.5	3.2	45 35.96	+ 0.66	.....	+15.80	.....	4 45 52.42
	$\omega$ Aurigæ .....	31.7	48.5	5.4	22.0	38.7	48 5.26	+ 0.41	.....	+15.80	.....	4 48 21.47
	10 Orionis .....	30.5	43.7	56.8	10.2	23.5	49 56.94	+ 0.73	.....	+15.80	.....	4 50 13.47
	63 Eridani .....	30.6	44.4	57.9	11.4	24.7	51 57.80	+ 0.81	.....	+15.80	.....	4 52 14.41

(a) Clock put forward one minute.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Jan. 15	14 Orionis .....	25.0	38.4	51.8	5.3	18.6	58	51.82	+ 0.69	.....	+15.81	4 59	8.32	
	Vesta .....	52.2	6.6	21.2	35.5	49.8	13	21.06	+ 0.57	.....	+15.89	6 13	37.52	
	δ Ursæ Min. S. P. ....	59.0	43.0	26.5	9.5	52.0	23	26.00	+ 9.24	.....	+15.90	6 23	51.14	
	24 Ursæ Min. S. P. ....	2.0	13.0	24.0	34.0	45.0	29	23.60	+10.30	.....	+15.90	6 29	49.80	
	δ Ursæ Minoris .....	15.0	58.5	41.5	24.0	7.0	23	41.20	- 7.51	.....	+16.65	18 23	50.34	
Jan. 16	Sun 1 Limb .....	4.1	18.5	32.8	47.0	1.2	49	32.72	+ 0.89	.....	+16.74	19 49	50.35	
	Sun 2 Limb .....	24.0	38.3	52.4	6.7	21.0	51	52.48	+ 0.89	.....	+16.74	19 52	10.11	
	Venus 1 Limb .....	17.6	31.8	46.1	0.3	14.6	20	46.08	+ 0.89	.....	+16.77	20 21	3.74	
	α Cygni .....	0.2	18.8	37.4	56.2	14.8	35	37.48	+ 0.33	+16.80	+16.79	20 35	54.60	
	ζ Cygni .....	15.8	31.2	46.5	1.7	16.9	5	46.42	+ 0.52	16.79	+16.82	21 6	3.76	
	ε Pegasi .....	31.2	44.7	58.1	11.6	25.0	35	58.12	+ 0.69	16.82	+16.85	21 36	15.66	
	ζ Pegasi .....	40.5	54.1	7.5	21.0	34.6	33	7.54	+ 0.68	16.89	+16.92	22 33	25.14	
	α Pegasi .....	58.7	12.5	26.4	39.9	53.7	56	26.24	+ 0.65	17.00	+16.95	22 56	43.84	
	65 Piscium preceding	27.0	.....	56.7	.....	26.6	40	56.77	+ 0.54	.....	+17.08	0 41	14.39	
	65 Piscium following	.....	42.4	.....	12.2	.....	40	57.30	+ 0.54	.....	+17.08	0 41	14.92	
	67 Piscium .....	31.8	46.6	1.4	16.4	31.1	47	1.46	+ 0.54	.....	+17.09	0 47	19.09	
	28 Ceti .....	15.5	29.0	42.4	56.0	9.5	57	42.48	+ 0.82	.....	+17.10	0 58	0.40	
	α Ursæ Minoris .....	2.0	11.0	.....	42.0	.....	1	27.37	-17.69	.....	+17.10	1 1	26.78	
	32 Ceti .....	22.5	36.1	49.8	3.2	16.6	1	49.64	+ 0.82	.....	+17.10	1 2	7.56	
	46 Ceti .....	56.6	10.4	24.1	37.8	51.7	17	24.12	+ 0.85	.....	+17.12	1 17	42.09	
	A. S. C. 179 .....	50.1	3.6	17.0	30.5	44.0	29	17.04	+ 0.82	.....	+17.13	1 29	34.99	
	α <sup>1</sup> Ceti .....	11.4	24.6	38.0	51.3	4.5	10	37.96	+ 0.74	.....	+17.26	3 10	55.96	
	σ Persei .....	19.0	38.5	58.2	17.8	37.6	18	58.22	+ 0.28	.....	+17.27	3 19	15.77	
	12 Tauri .....	44.3	57.5	10.8	24.2	37.6	31	10.88	+ 0.73	.....	+17.29	3 31	28.90	
	A. S. C. 400 .....	25.9	41.5	57.2	12.7	28.4	33	57.14	+ 0.49	.....	+17.29	3 34	14.92	
	π Eridani .....	47.4	1.2	14.6	28.4	42.0	38	14.72	+ 0.83	.....	+17.29	3 38	32.84	
	Groombridge 750 .....	44.0	20.5	55.0	33.0	8.5	47	56.20	- 4.98	.....	+17.31	3 48	8.53	
	46 Eridani .....	20.2	33.4	46.7	0.0	13.4	25	46.74	+ 0.80	.....	+17.35	4 26	4.89	
	51 Eridani .....	46.3	59.6	12.8	26.2	39.5	29	12.88	+ 0.76	.....	+17.36	4 29	31.00	
	A. S. C. 547 .....	46.6	0.2	13.5	27.2	40.7	35	13.64	+ 0.68	.....	+17.37	4 35	31.69	
	A. S. C. 552 .....	45.2	18.0	50.4	23.2	56.0	37	50.56	- 0.29	.....	+17.37	4 38	7.64	
	1 Orionis .....	22.5	35.8	49.2	2.5	15.8	40	49.16	+ 0.70	.....	+17.37	4 41	7.23	
	3 Orionis .....	54.4	7.8	21.0	34.4	47.6	42	21.04	+ 0.71	.....	+17.38	4 42	39.13	
	ω Eridani .....	15.4	28.8	42.1	55.4	8.7	44	42.08	+ 0.79	.....	+17.38	4 45	0.25	
	62 Eridani .....	44.7	58.2	11.3	24.8	38.2	48	11.44	+ 0.79	.....	+17.38	4 48	29.61	
	64 Eridani .....	42.6	56.1	9.7	23.4	37.1	52	9.78	+ 0.83	.....	+17.39	4 52	28.00	
	14 Orionis .....	23.5	36.9	50.2	3.6	17.0	58	50.24	+ 0.70	.....	+17.40	4 59	8.34	
	Vesta .....	54.2	8.7	23.3	37.7	52.1	12	23.20	+ 0.58	.....	+17.48	6 12	41.26	
	δ Ursæ Min. S. P. ....	57.0	40.0	23.0	7.0	50.0	23	23.40	+ 9.25	.....	+17.50	6 23	50.15	
	δ Ursæ Minoris .....	15.0	58.0	41.5	24.5	6.5	23	41.10	- 8.26	.....	+18.39	18 23	51.23	
Jan. 17	Sun 1 Limb .....	19.7	33.9	48.1	2.4	16.5	53	48.12	+ 1.00	.....	+18.50	19 54	7.62	
	Sun 2 Limb .....	39.1	53.3	7.5	21.8	36.2	56	7.58	+ 1.00	.....	+18.50	19 56	27.08	
	ζ Cygni .....	14.3	29.6	44.7	0.0	15.2	5	44.76	+ 0.58	+18.39	+18.59	21 6	3.93	
	ζ Pegasi .....	38.7	52.4	5.8	19.3	32.7	33	5.78	+ 0.76	18.57	+18.70	22 33	25.24	
	α Pegasi .....	57.0	10.7	24.5	38.1	51.6	56	24.38	+ 0.73	18.77	+18.73	22 56	43.84	
	β Ceti .....	42.4	56.4	10.5	24.5	38.4	35	10.44	+ 0.98	18.88	+18.84	0 35	30.26	
	65 Piscium preceding	.....	40.1	.....	10.0	.....	40	55.05	+ 0.60	.....	+18.85	0 41	14.50	
	65 Piscium following	25.6	.....	55.5	.....	25.2	40	55.43	+ 0.60	.....	+18.85	0 41	14.88	
	36 Andromedæ .....	32.7	47.3	1.6	16.0	30.4	46	1.60	+ 0.65	.....	+18.85	0 46	21.10	
	α Ursæ Minoris .....	1.0	11.5	.....	39.0	.....	1	26.20	-19.46	.....	+18.87	1 1	25.61	
	32 Ceti .....	20.8	34.3	47.6	1.1	14.5	1	47.66	+ 0.91	.....	+18.87	1 2	7.44	
	θ <sup>1</sup> Ceti .....	11.8	25.2	38.6	52.3	5.7	15	38.72	+ 0.91	19.16	+18.89	1 15	58.52	
	47 Ceti .....	7.6	21.3	35.1	48.7	2.5	18	35.04	+ 0.94	.....	+18.89	1 18	54.87	
	α Trianguli .....	5.4	20.3	35.5	50.5	5.7	43	35.48	+ 0.59	.....	+18.93	1 43	55.00	
	A. S. C. 226 .....	46.8	1.6	16.3	31.0	45.5	57	16.24	+ 0.62	.....	+18.95	1 57	35.81	
	63 Ceti .....	39.1	52.4	6.0	19.4	32.7	3	5.92	+ 0.85	.....	+18.95	2 3	25.72	



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpol- ated.	
Jan. 17	o Ceti .....	26.8	40.3	53.5	6.7	20.2	m. s. 10 53.50	+ 0.87	.....	+ 18.96	h. m. s. 2 11 13.33
	ζ Persei.....	11.3	26.8	42.5	58.2	13.6	43 42.48	+ 0.55	.....	+ 19.07	3 44 2.10
	35 Eridani .....	36.9	50.3	3.7	16.8	30.2	53 3.58	+ 0.86	.....	+ 19.08	3 53 23.52
	46 Eridani .....	18.3	31.6	45.1	58.5	12.0	25 45.10	+ 0.90	.....	+ 19.12	4 26 5.12
	ν <sup>2</sup> Eridani .....	31.2	44.4	57.6	11.0	44.4	27 57.72	+ 0.87	.....	+ 19.12	4 28 17.71
	1 Orionis .....	20.5	34.0	47.4	1.0	14.3	40 47.44	+ 0.78	.....	+ 19.14	4 41 7.36
	5 Orionis .....	13.6	27.0	40.2	53.6	7.0	44 40.28	+ 0.82	.....	+ 19.14	4 45 0.24
	62 Eridani .....	42.8	56.2	9.5	23.1	36.4	48 9.60	+ 0.88	.....	+ 19.15	4 48 29.63
	ε Aurigæ.....	30.7	49.2	7.4	25.6	44.4	50 7.46	+ 0.39	.....	+ 19.15	4 50 27.00
	64 Eridani.....	40.7	54.5	8.1	21.7	35.4	52 8.08	+ 0.93	.....	+ 19.15	4 52 28.16
	66 Eridani.....	2.5	15.8	29.2	42.6	55.9	58 29.20	+ 0.88	.....	+ 19.16	4 58 49.24
	δ Ursæ Min. S. P. ....	.....	39.0	21.5	5.0	48.5	23 21.92	+ 10.18	.....	+ 19.26	6 23 51.36
	δ Ursæ Minoris .....	13.0	56.5	39.5	23.0	.....	23 39.58	- 8.26	.....	+ 20.13	18 23 51.45
Jan. 18	δ Ursæ Minoris .....	12.0	55.0	.....	.....	.....	23 38.15	- 8.26	.....	+ 21.87	18 23 51.76
	α Aquilæ.....	4.7	18.2	31.7	45.1	58.5	42 31.64	+ 0.78	+ 22.05	+ 21.96	19 42 54.38
	β Aquilæ.....	33.4	46.7	0.3	13.7	27.1	47 0.24	+ 0.79	22.08	+ 21.97	19 47 23.00
Jan. 19	Sun 2 Limb.....	7.5	21.7	36.0	50.2	4.2	4 35.92	+ 1.00	.....	+ 21.99	20 4 58.91
	Venus 1 Limb.....	53.3	7.5	21.7	35.8	49.8	36 21.62	+ 0.99	.....	+ 22.03	20 36 44.64
	ζ Cygni.....	10.6	25.7	41.1	56.3	11.6	5 41.06	+ 0.58	22.09	+ 22.06	21 6 3.70
	ε Pegasi.....	26.0	39.5	52.8	6.3	19.7	35 52.86	+ 0.77	22.01	+ 22.10	21 36 15.73
	α Aquarii.....	40.2	53.6	7.0	20.3	33.6	57 6.94	+ 0.85	22.11	+ 22.13	21 57 29.92
	α Pegasi.....	53.6	7.3	20.8	34.6	48.4	56 20.94	+ 0.73	22.20	+ 22.19	22 56 43.86
	φ Aquarii.....	8.6	21.8	35.3	48.5	1.8	5 35.20	+ 0.90	.....	+ 22.20	23 5 58.30
	Moon 1 Limb .....	12.4	26.1	39.7	53.4	7.1	29 39.74	+ 0.89	.....	+ 22.23	23 30 2.86
	ω Piscium.....	12.5	26.1	39.3	52.6	6.1	50 39.32	+ 0.79	.....	+ 22.25	23 51 2.36
	α Andromedæ.....	11.0	26.1	41.2	56.3	11.2	59 41.16	+ 0.60	22.16	+ 22.26	0 0 4.02
	65 Piscium preceding .....	21.8	.....	51.6	.....	21.5	40 51.63	+ 0.60	.....	+ 22.31	0 41 14.54
	65 Piscium following .....	.....	37.2	.....	6.8	.....	40 52.00	+ 0.60	.....	+ 22.31	0 41 14.91
	36 Andromedæ.....	29.2	43.6	58.2	12.4	26.7	45 58.02	+ 0.65	.....	+ 22.31	0 46 20.98
	β Andromedæ.....	48.5	4.6	20.8	37.0	53.2	0 20.82	+ 0.52	.....	+ 22.33	1 0 43.67
	α Ursæ Minoris .....	53.0	8.0	.....	34.5	.....	1 20.87	- 19.46	.....	+ 22.33	1 1 23.74
	α Trianguli .....	1.6	17.0	32.3	47.5	2.7	43 32.22	+ 0.59	.....	+ 22.37	1 43 55.18
	A. S. C. 226.....	43.7	58.2	13.0	27.6	42.4	57 12.98	+ 0.62	.....	+ 22.39	1 57 35.99
	29 Tauri .....	18.3	31.6	45.0	58.3	11.6	36 44.96	+ 0.80	.....	+ 22.50	3 37 8.26
	π Eridani .....	42.4	56.2	9.8	23.3	36.9	38 9.72	+ 0.93	.....	+ 22.50	3 38 33.15
	ζ Persei.....	8.2	23.6	39.3	54.7	10.5	43 39.26	+ 0.55	.....	+ 22.50	3 44 2.31
	ε Persei.....	7.5	24.8	41.9	59.3	16.5	46 42.00	+ 0.45	.....	+ 22.51	3 47 4.96
	46 Eridani .....	14.8	28.3	41.6	55.1	8.4	25 41.64	+ 0.90	.....	+ 22.55	4 26 5.09
	ν <sup>2</sup> Eridani .....	27.6	40.9	54.3	7.5	20.8	27 54.22	+ 0.87	.....	+ 22.55	4 28 17.64
	53 Eridani .....	58.6	12.4	26.2	39.9	53.6	30 26.14	+ 0.94	.....	+ 22.56	4 30 49.64
	A. S. C. 542.....	5.6	19.5	33.3	46.8	0.7	31 33.18	+ 0.94	.....	+ 22.56	4 31 56.68
	A. S. C. 552.....	39.6	12.4	45.4	18.2	50.8	37 45.28	- 0.31	.....	+ 22.56	4 38 7.53
	59 Eridani .....	28.0	41.7	55.6	9.4	23.3	40 55.60	+ 0.96	.....	+ 22.57	4 41 19.13
	60 Eridani .....	6.4	20.1	34.0	47.7	1.6	42 33.96	+ 0.96	.....	+ 22.57	4 42 57.49
	ω Eridani.....	10.2	23.5	36.8	50.2	3.4	44 36.82	+ 0.89	.....	+ 22.57	4 45 0.28
	62 Eridani .....	39.4	53.1	6.4	19.6	32.8	48 6.26	+ 0.88	.....	+ 22.58	4 48 29.72
	ζ Aurigæ.....	17.4	34.6	52.4	10.0	27.5	50 52.38	+ 0.43	.....	+ 22.58	4 51 15.39
	↓ Eridani.....	49.1	2.4	15.6	29.1	42.4	53 15.72	+ 0.90	.....	+ 22.58	4 53 39.20
	66 Eridani .....	59.2	12.5	25.8	39.2	52.5	58 25.84	+ 0.88	.....	+ 22.59	4 58 49.31
	Vesta .....	9.3	23.6	38.1	52.5	7.1	9 38.12	+ 0.64	.....	+ 22.67	6 10 1.43
	δ Ursæ Min. S. P. ....	53.0	35.5	19.5	2.0	45.5	23 19.10	+ 10.18	.....	+ 22.68	6 23 51.96
Jan. 20	ι Piscium .....	48.5	1.8	15.2	28.5	41.8	31 15.16	+ 0.77	+ 23.83	+ 23.82	23 31 39.75
	ω Piscium.....	11.2	24.3	37.6	51.0	4.5	50 37.72	+ 0.76	.....	+ 23.84	23 51 2.32
	α Andromedæ.....	9.4	24.4	39.5	54.6	9.5	59 39.48	+ 0.58	23.85	+ 23.85	0 0 3.91
	γ Pegasi .....	4.5	18.4	32.0	45.7	59.4	4 32.00	+ 0.70	23.91	+ 23.85	0 4 56.55



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.	
		I.	II.	III.	IV.	V.	m.	s.		observed.	interpolated.		
Jan. 20	Moon 1 Limb .....	8.1	21.7	35.4	49.0	2.5	21	35.34	+ 0.81	.....	+23.87	h. m. s. 0 22 0.02	
	$\beta$ Ceti.....	37.5	51.5	5.6	19.6	33.5	35	5.54	+ 0.92	+23.81	+23.89	0 35 30.35	
	$\delta$ Piscium.....	28.5	41.7	55.1	8.6	22.0	39	55.18	+ 0.75	.....	+23.89	0 40 19.82	
	$\epsilon$ Piscium.....	43.9	57.3	10.5	24.0	37.4	54	10.62	+ 0.75	.....	+23.91	0 54 35.28	
	$\alpha$ Ursæ Minoris .....	51.5	5.0	17.5	31.0	46.0	1	18.20	-18.02	.....	+23.92	.....	
Jan. 21	Sun 1 Limb.....	14.2	28.4	42.6	56.8	11.1	10	42.62	+ 0.93	.....	+25.24	20 11 8.79	
	$\alpha$ Cygni.....	51.5	10.5	28.8	47.8	6.5	35	29.02	+ 0.38	+25.22	+25.27	20 35 54.67	
	$\zeta$ Cygni.....	7.4	22.7	38.0	53.2	8.4	5	37.94	+ 0.57	25.22	+25.30	21 6 3.81	
	$\epsilon$ Pegasi.....	22.5	36.0	49.6	3.2	16.6	35	49.58	+ 0.74	25.32	+25.34	21 36 15.66	
	$\alpha$ Aquarii.....	37.2	50.4	3.7	16.8	30.3	57	3.68	+ 0.81	25.41	+25.36	21 57 29.85	
	$\alpha$ Pegasi.....	50.1	3.8	17.7	31.4	45.2	56	17.64	+ 0.70	25.52	+25.44	22 56 43.78	
	$\epsilon$ Piscium.....	42.4	55.5	9.2	22.6	35.8	54	9.10	+ 0.75	.....	+25.58	0 54 35.43	
	(a) $\alpha$ Ursæ Minoris .....	58.0	3.0	15.5	29.0	.....	1	15.83	-17.64	.....	+25.59	1 1 23.78	
	Moon 1 Limb .....	32.5	46.4	0.3	14.1	28.0	14	0.26	+ 0.76	.....	+25.61	1 14 26.63	
	$\epsilon$ Piscium.....	0.5	14.3	27.6	41.1	54.4	36	27.58	+ 0.75	.....	+25.64	1 36 53.97	
	$\gamma$ Arietis.....	48.2	2.1	16.0	30.1	44.2	44	16.12	+ 0.67	.....	+25.65	1 44 42.44	
	12 Tauri.....	35.8	49.2	2.4	15.7	29.0	31	2.42	+ 0.78	.....	+25.78	3 31 28.98	
	29 Tauri.....	15.0	28.4	41.7	55.1	8.5	36	41.74	+ 0.76	.....	+25.79	3 37 8.29	
	30 Eridani.....	52.3	5.5	18.8	32.2	45.5	44	18.86	+ 0.84	.....	+25.80	3 44 45.50	
	$\zeta$ Persei.....	33.8	50.3	6.6	22.7	39.2	48	6.52	+ 0.51	.....	+25.80	3 48 32.83	
	45 Tauri.....	53.9	7.3	20.6	34.0	47.4	2	20.64	+ 0.77	.....	+25.82	4 2 47.23	
	47 Tauri.....	18.6	32.2	45.7	59.1	12.5	4	45.62	+ 0.74	.....	+25.83	4 5 12.19	
	40 Eridani.....	59.1	12.5	26.0	39.4	52.8	7	25.96	+ 0.85	.....	+25.83	4 7 52.64	
	$\xi$ Eridani.....	47.6	0.9	14.4	27.7	41.0	15	14.32	+ 0.83	.....	+25.84	4 15 40.99	
	47 Eridani .....	34.2	47.4	0.7	14.2	27.6	26	0.82	+ 0.85	.....	+25.85	4 26 27.52	
	$\nu^2$ Eridani.....	24.3	37.6	51.0	4.3	17.5	27	50.94	+ 0.82	.....	+25.85	4 28 17.61	
	53 Eridani .....	55.4	9.2	22.9	36.6	50.3	30	22.88	+ 0.89	.....	+25.86	4 30 49.63	
	A. S. C. 542.....	2.5	16.3	29.8	43.7	57.4	31	29.94	+ 0.89	.....	+25.86	4 31 56.69	
	59 Eridani .....	24.6	38.4	52.4	6.3	20.2	40	52.38	+ 0.91	.....	+25.87	4 41 19.16	
	5 Orionis.....	7.1	20.4	33.6	46.8	0.3	44	33.64	+ 0.78	.....	+25.87	4 45 0.29	
	64 Eridani .....	34.3	47.7	1.5	15.0	28.5	52	1.40	+ 0.88	.....	+25.88	4 52 28.16	
	66 Eridani .....	56.0	9.4	22.6	36.1	49.3	58	22.68	+ 0.83	.....	+25.89	4 58 49.40	
	Vesta .....	26.8	41.3	55.6	10.2	24.6	7	55.70	+ 0.62	.....	+25.97	6 8 22.29	
	$\delta$ Ursæ Min. S. P. ....	.....	33.0	.....	0.5	42.0	23	16.50	+ 9.30	.....	+25.99	6 23 51.79	
	Jan. 22	$\alpha$ Ursæ Minoris .....	52.0	4.0	.....	.....	.....	1	18.45	-21.57	.....	+27.37	1 1 24.25
		$\epsilon$ Piscium.....	59.1	12.6	26.2	39.5	52.8	36	26.04	+ 0.89	.....	+27.41	1 36 54.34
		$\eta$ Tauri.....	59.1	13.4	27.9	42.4	57.0	37	27.96	+ 0.73	+27.60	+27.56	3 37 56.25
30 Eridani .....		50.4	3.7	17.1	30.4	43.7	44	17.06	+ 1.01	.....	+27.57	3 44 45.64	
$\zeta$ Persei.....		32.3	48.5	5.0	21.2	37.4	48	4.88	+ 0.59	.....	+27.57	3 48 33.04	
47 Tauri.....		17.0	30.5	44.0	57.4	10.7	4	43.92	+ 0.89	.....	+27.59	4 5 12.40	
$\mu$ Tauri.....		53.5	7.1	20.3	33.7	47.2	6	20.36	+ 0.89	.....	+27.60	4 6 48.85	
$\xi$ Eridani .....		45.7	59.4	12.5	25.7	39.2	15	12.50	+ 0.99	.....	+27.61	4 15 41.10	
$\alpha$ Tauri .....		46.4	0.1	13.8	27.7	41.6	26	13.92	+ 0.81	27.67	+27.62	4 26 42.35	
53 Eridani.....		53.6	7.4	20.9	34.7	48.6	30	21.04	+ 1.08	.....	+27.63	4 30 49.75	
A. S. C. 542 .....		0.6	14.4	28.2	41.8	55.5	31	28.10	+ 1.08	.....	+27.63	4 31 56.81	
59 Eridani.....		22.6	36.6	50.5	4.4	18.4	40	50.50	+ 1.10	.....	+27.64	4 41 19.24	
60 Eridani.....		1.2	15.2	29.1	42.8	56.6	42	28.98	+ 1.10	.....	+27.64	4 42 57.72	
5 Orionis .....		5.4	18.6	31.8	45.2	58.4	44	31.88	+ 0.94	.....	+27.64	4 45 0.46	
10 Camelopardi.....		48.4	15.0	41.7	8.6	35.3	48	41.80	- 0.02	.....	+27.65	4 49 9.43	
$\psi$ Eridani.....		43.7	57.3	10.7	24.1	37.4	53	10.64	+ 1.03	.....	+27.65	4 53 39.32	
$\alpha$ Aurigæ.....		43.8	2.8	21.8	40.9	0.0	4	21.86	+ 0.41	27.73	+27.66	5 4 49.93	
$\beta$ Orionis.....		54.2	7.4	20.8	34.2	47.5	6	20.82	+ 1.03	27.58	+27.67	5 6 49.52	
$\beta$ Tauri.....		10.1	25.1	40.2	55.4	10.4	15	40.24	+ 0.68	27.62	+27.68	5 16 8.60	
Vesta.....		37.8	52.4	6.7	21.2	35.7	7	6.76	+ 0.73	.....	+27.74	6 7 35.23	
$\delta$ Ursæ Min. S. P. ....		48.0	31.0	13.5	57.5	40.0	23	14.00	+11.31	.....	+27.75	6 23 53.06	

(a) Wire I. rejected ; apparently 10<sup>s</sup> erroneous.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Jan. 23	Sun 1 Limb.....	.....	.....	5.0	19.2	33.5	19	5.11	+ 0.96	.....	+28.70	20 19 34.77
	Sun 2 Limb.....	55.0	9.2	23.5	.....	51.9	21	23.43	+ 0.96	.....	+28.70	20 21 53.09
	$\alpha$ Cygni.....	48.4	6.8	25.6	44.4	13.2	35	25.68	+ 0.40	+28.55	+28.71	20 35 54.79
	$\alpha$ Tauri.....	44.7	58.6	12.4	26.3	39.8	26	12.36	+ 0.71	29.32	+29.25	4 26 42.32
	$\epsilon$ Aurigæ.....	20.7	39.2	57.0	15.6	34.2	49	57.34	+ 0.42	.....	+29.29	4 50 27.05
	$\alpha$ Aurigæ.....	42.1	1.4	20.3	39.4	58.5	4	20.34	+ 0.38	29.27	+29.30	5 4 50.02
	$\beta$ Tauri.....	8.4	23.4	38.6	53.8	8.9	15	38.62	+ 0.60	29.32	+29.32	5 16 8.54
	$\delta$ Orionis.....	51.4	4.7	18.2	31.4	44.7	23	18.08	+ 0.83	29.40	+29.33	5 23 48.24
	Vesta.....	50.6	5.2	19.6	34.1	48.6	6	19.62	+ 0.65	.....	+29.38	6 6 49.65
	$\delta$ Ursæ Min. S. P. ....	46.0	29.5	13.0	56.0	39.0	23	12.70	+ 9.50	.....	+29.40	.....
Jan. 24	Sun 1 Limb.....	.....	0.9	15.0	28.8	43.2	23	14.95	+ 1.02	.....	+30.49	20 23 46.46
	Sun 2 Limb.....	4.7	18.6	32.7	47.4	1.5	25	32.98	+ 1.02	.....	+30.49	20 26 4.49
	$\gamma$ Cassiopeæ.....	37.0	3.5	30.4	56.7	23.2	46	30.16	+ 0.06	.....	+30.83	0 47 1.05
	$\theta$ Cassiopeæ.....	3.0	25.8	48.6	11.4	34.1	0	48.58	+ 0.22	.....	+30.84	1 1 19.64
	$\alpha$ Ursæ Minoris.....	40.0	56.5	.....	23.0	37.0	1	9.05	-18.68	.....	+30.84	.....
	$\epsilon$ Cassiopeæ.....	23.0	52.2	21.2	50.4	19.5	42	21.26	- 0.06	.....	+30.90	1 42 52.10
	$\alpha$ Arietis.....	6.4	20.7	35.2	49.5	4.1	57	35.18	+ 0.70	+30.84	+30.92	1 58 6.80
	$\eta$ Tauri.....	55.5	10.2	24.5	38.9	53.4	37	24.50	+ 0.69	31.07	+31.05	3 37 56.24
	$\epsilon$ Persei.....	58.8	16.2	33.4	50.6	7.7	46	33.34	+ 0.50	.....	+31.06	3 47 4.90
	$\gamma^1$ Eridani.....	32.9	46.5	0.1	13.6	27.4	50	0.10	+ 0.97	31.06	+31.06	3 50 32.13
	37 Tauri.....	11.4	26.0	40.3	54.5	8.8	54	40.20	+ 0.71	.....	+31.07	3 55 11.98
	(a) Moon 1 Limb.....	17.4	32.7	47.9	3.1	17.2	5	47.86	+ 0.70	.....	+31.08	4 6 19.64
	$\alpha$ Tauri.....	42.7	56.6	10.5	24.4	38.2	26	10.48	+ 0.76	31.14	+31.10	4 26 42.34
	$\tau$ Tauri.....	35.7	50.4	4.5	19.1	33.4	32	4.62	+ 0.70	.....	+31.11	4 32 36.43
	60 Eridani.....	57.7	11.6	25.6	39.4	53.3	42	25.52	+ 1.00	.....	+31.12	4 42 57.64
	$\omega$ Eridani.....	1.6	15.0	28.2	41.6	55.1	44	28.30	+ 0.92	.....	+31.12	4 45 0.34
	$\epsilon$ Tauri.....	29.5	43.7	58.1	12.3	26.5	52	58.02	+ 0.71	.....	+31.13	4 53 29.86
	$\alpha$ Aurigæ.....	40.2	59.4	18.4	37.5	56.5	4	18.40	+ 0.41	31.17	+31.14	5 4 49.95
Jan. 25	Sun 1 Limb.....	55.6	9.8	24.1	38.0	52.1	27	23.92	+ 0.89	.....	+32.15	20 27 56.96
	Sun 2 Limb.....	14.0	27.8	41.7	56.0	10.2	29	41.94	+ 0.89	.....	+32.15	20 30 14.98
	$\alpha$ Cygni.....	44.6	3.4	22.2	40.8	59.4	35	22.08	+ 0.40	+32.16	+32.16	20 35 54.64
	$\epsilon$ Pegasi.....	15.7	29.3	42.7	56.3	9.7	35	42.74	+ 0.73	32.18	+32.23	21 36 15.70
	$\alpha$ Aquarii.....	30.3	43.6	56.8	10.1	23.3	56	56.82	+ 0.79	32.30	+32.25	21 57 29.86
	$\gamma$ Aquilæ.....	33.7	47.2	0.6	14.1	27.6	38	0.64	+ 0.78	+33.79	+33.89	19 38 35.31
	$\alpha$ Aquilæ.....	53.1	6.5	19.8	33.4	46.7	42	19.90	+ 0.79	33.88	+33.89	19 42 54.58
Jan. 26	Sun 1 Limb.....	4.2	18.5	32.4	46.6	0.5	31	32.44	+ 0.97	.....	+33.96	20 32 7.37
	Sun 2 Limb.....	22.2	36.3	50.3	4.5	18.4	33	50.34	+ 0.97	.....	+33.96	20 34 25.27
	$\zeta$ Cygni.....	58.5	13.8	29.3	44.5	59.7	5	29.16	+ 0.61	33.98	+34.00	21 6 3.77
	Venus 1 Limb.....	32.3	46.6	0.7	14.7	28.6	12	0.58	+ 0.96	.....	+34.00	21 12 35.54
	$\epsilon$ Pegasi.....	13.8	27.4	40.7	54.4	7.7	35	40.80	+ 0.79	34.07	+34.03	21 36 15.62
	$\gamma$ Cassiopeæ.....	33.8	0.2	26.6	53.3	19.6	46	26.70	+ 0.06	.....	+34.28	0 47 1.04
	$\alpha$ Ursæ Minoris.....	35.5	50.0	.....	.....	.....	1	3.15	-17.97	.....	+34.30	.....
	$\alpha$ Aurigæ.....	36.6	55.7	14.8	34.0	53.1	4	14.84	+ 0.40	34.71	+34.66	5 4 49.90
	$\beta$ Orionis.....	47.1	0.4	14.0	27.3	40.5	6	13.86	+ 0.91	34.53	+34.66	5 6 49.43
	$\beta$ Tauri.....	2.9	18.2	33.3	48.4	3.4	15	33.24	+ 0.62	34.65	+34.68	5 16 8.54
	26 Aurigæ.....	13.4	28.7	44.3	59.7	15.0	27	44.22	+ 0.60	.....	+34.69	5 28 19.51
	136 Tauri.....	8.7	23.8	38.6	53.7	8.6	42	38.68	+ 0.63	.....	+34.71	5 43 14.02
	Vesta.....	.....	53.6	8.1	.....	.....	4	8.10	+ 0.67	.....	+34.75	6 4 43.52
	Moon 1 Limb.....	6.0	21.4	37.0	52.9	8.4	12	37.14	+ 0.66	.....	+34.76	6 13 12.56
Jan. 27	$\mu$ Geminorum.....	8.5	22.7	37.3	51.6	6.0	12	37.22	+ 0.67	+36.92	+36.88	6 13 14.77
	$\delta$ Ursæ Min. S. P. ....	40.0	22.5	6.0	49.0	32.5	23	6.00	+ 9.34	.....	+36.90	.....
	$\epsilon$ Geminorum.....	56.4	10.6	25.6	40.5	55.1	33	25.64	+ 0.64	.....	+36.91	6 34 3.19
	$\alpha$ Canis Majoris.....	59.3	13.1	27.0	40.8	54.6	37	26.96	+ 0.95	36.82	+36.92	6 38 4.83
	$\tau$ Geminorum.....	46.6	2.1	17.4	33.0	48.3	0	17.48	+ 0.60	.....	+36.95	7 0 55.03

(a) Wire V. rejected, being apparently 1<sup>s</sup> erroneous.



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
Jan. 27	$\delta$ Geminorum .....	25.4	40.0	54.4	8.5	23.1	m. s. 9 54.28	+ 0.68	+ 36.99	+ 36.96	h. m. s. 7 10 31.92
	Moon 1 Limb .....	23.0	38.1	53.8	9.0	24.4	14 53.66	+ 0.65	.....	+ 36.97	7 15 31.28
	$\alpha$ Geminorum preced. ....	11.4	.....	43.2	.....	14.5	23 43.03	+ 0.57	} 37.08 {	+ 36.98	7 24 20.58
	$\alpha$ Geminorum follow. ....	.....	27.5	.....	59.4	.....	23 43.45	+ 0.57		+ 36.98	7 24 21.00
	$\alpha$ Canis Minoris .....	49.4	2.7	16.2	29.4	42.6	30 16.06	+ 0.80	36.95	+ 36.99	7 30 53.85
	$\kappa$ Geminorum .....	38.2	52.8	7.5	22.1	36.7	34 7.46	+ 0.65	.....	+ 37.00	7 34 45.11
	6 Cancrī .....	31.5	46.4	1.6	16.6	31.8	53 1.58	+ 0.62	.....	+ 37.02	7 53 39.22
Jan. 28	$\alpha$ Ursæ Minoris .....	33.0	45.5	.....	.....	.....	0 59.70	- 19.39	.....	+ 38.38	1 1 18.69
	$\sigma$ Ceti .....	20.8	34.5	48.4	2.4	16.2	23 48.46	+ 1.03	.....	+ 38.49	2 24 27.98
	77 Ceti .....	40.3	53.7	7.3	20.5	34.1	26 7.18	+ 0.97	.....	+ 38.49	2 26 46.64
	33 Arietis .....	8.7	23.6	38.4	53.3	8.2	30 38.44	+ 0.68	.....	+ 38.50	2 31 17.62
	84 Ceti .....	53.7	7.1	20.4	33.6	47.0	32 20.36	+ 0.92	.....	+ 38.50	2 32 59.78
	A. S. C. 299 .....	34.6	58.0	21.4	44.7	8.0	38 21.34	+ 0.20	.....	+ 38.51	2 39 0.05
	5 Eridani .....	28.2	41.5	54.9	8.2	21.5	50 54.86	+ 0.93	.....	+ 38.53	2 51 34.32
	$\zeta^1$ Eridani .....	9.4	22.9	36.4	49.7	3.2	52 36.32	+ 0.97	.....	+ 38.53	2 53 15.82
	$\zeta$ Persei .....	40.5	57.3	14.2	31.2	48.0	54 14.24	+ 0.54	.....	+ 38.53	2 54 53.31
	45 Tauri .....	41.0	54.5	7.6	21.0	34.5	2 7.72	+ 0.87	.....	+ 38.62	4 2 47.21
	40 Eridani .....	46.3	59.9	13.3	26.5	40.2	7 13.24	+ 0.97	.....	+ 38.63	4 7 52.84
	$\xi$ Eridani .....	34.8	48.3	1.5	14.7	28.2	15 1.50	+ 0.94	.....	+ 38.64	4 15 41.08
	$\alpha$ Tauri .....	35.3	49.2	3.2	16.8	30.6	26 3.02	+ 0.78	+ 38.54	+ 38.65	4 26 42.45
	8 Orionis .....	47.2	0.4	13.6	27.0	40.2	45 13.68	+ 0.89	.....	+ 38.68	4 45 53.25
	10 Camelopardi .....	36.8	4.0	30.4	57.2	24.2	48 30.52	+ 0.04	.....	+ 38.68	4 49 9.24
	$\psi$ Eridani .....	32.7	46.3	59.6	13.0	26.5	52 59.62	+ 0.97	.....	+ 38.69	4 53 39.28
	$\alpha$ Aurigæ .....	32.6	51.6	10.8	29.8	49.0	4 10.76	+ 0.42	38.75	+ 38.71	5 4 49.89
	$\beta$ Orionis .....	42.6	56.2	9.7	23.2	36.6	6 9.66	+ 0.97	38.75	+ 38.71	5 6 49.34
	$\beta$ Tauri .....	58.8	13.9	29.1	44.2	59.2	15 29.04	+ 0.66	38.80	+ 38.72	5 16 8.42
	$\alpha$ Orionis .....	22.4	35.8	49.2	2.6	16.2	45 49.24	+ 0.85	38.70	+ 38.76	5 46 28.85
	Vesta .....	19.8	34.4	48.8	3.4	17.8	2 48.84	+ 0.71	.....	+ 38.78	6 3 28.33
	$\delta$ Ursæ Min. S. P. ....	38.0	20.5	4.0	48.0	31.0	23 4.30	+ 10.25	.....	+ 38.81	6 23 53.36
	$\kappa$ Geminorum .....	36.3	50.9	5.6	20.2	34.8	34 5.56	+ 0.70	.....	+ 38.90	7 34 45.16
	6 Cancrī .....	29.5	44.6	59.6	14.7	29.7	52 59.62	+ 0.66	.....	+ 38.92	7 53 39.20
	Moon 1 Limb .....	12.4	27.6	42.4	57.3	12.2	13 42.38	+ 0.73	.....	+ 38.95	8 14 22.06
	$\delta$ Cancrī .....	25.8	39.7	53.7	7.6	21.8	34 53.72	+ 0.76	.....	+ 38.97	8 35 33.45
	$\xi$ Cancrī .....	58.9	13.4	27.7	42.2	56.6	59 27.76	+ 0.72	.....	+ 39.01	9 0 7.49
Jan. 29	$\alpha$ Arietis .....	56.7	11.2	25.6	40.2	54.5	57 25.64	+ 0.72	+ 40.29	+ 40.30	1 58 6.66
	$\alpha$ Aurigæ .....	30.5	49.6	8.7	28.0	47.2	4 8.80	+ 0.42	40.70	+ 40.54	5 4 49.76
	$\beta$ Orionis .....	41.2	54.6	8.0	21.3	34.7	6 7.96	+ 0.97	40.44	+ 40.54	5 6 49.47
	$\beta$ Tauri .....	57.1	12.2	27.4	42.4	57.4	15 27.30	+ 0.66	40.53	+ 40.55	5 16 8.51
	$\delta$ Orionis .....	40.3	53.6	6.8	19.9	33.4	23 6.80	+ 0.91	40.55	+ 40.56	5 23 48.27
	Vesta .....	43.2	57.4	12.4	26.7	41.2	2 12.18	+ 0.71	.....	+ 40.61	6 2 53.50
	$\delta$ Ursæ Min. S. P. ....	35.5	18.5	1.0	45.0	28.5	23 1.70	+ 10.25	.....	+ 40.64	.....
	$\xi$ Cancrī .....	57.2	11.4	25.7	40.3	54.7	59 25.86	+ 0.72	.....	+ 40.84	9 0 7.42
	Moon 2 Limb .....	56.4	10.7	25.4	39.8	54.0	10 25.26	+ 0.78	.....	+ 40.85	9 11 6.89
	$\lambda$ Leonis .....	22.5	37.2	51.5	6.1	20.5	21 51.56	+ 0.71	.....	+ 40.86	9 22 33.13
	$\phi$ Leonis .....	26.4	39.6	53.2	6.7	20.0	31 53.18	+ 0.85	.....	+ 40.88	9 32 34.91
Jan. 30	Sun 1 Limb .....	.....	.....	56.4	10.7	24.6	47 56.60	+ 1.27	.....	+ 41.73	20 48 39.60
	Sun 2 Limb .....	45.4	59.5	13.4	27.5	41.4	50 13.44	+ 1.27	.....	+ 41.73	20 50 56.44
	$\alpha$ Tauri .....	31.5	45.2	59.0	12.8	26.6	25 59.02	+ 0.93	+ 42.37	+ 42.31	4 26 42.26
	Vesta .....	8.2	22.6	37.3	51.8	6.3	1 37.24	+ 0.84	.....	+ 42.43	6 2 20.51
	$\mu$ Geminorum .....	2.7	17.3	31.6	46.0	0.3	12 31.58	+ 0.85	42.37	+ 42.44	6 13 14.87
	$\delta$ Ursæ Min. S. P. ....	32.5	15.5	56.0	40.5	23.5	22 57.60	+ 12.79	.....	+ 42.45	.....
	$\alpha$ Geminorum preced. ....	.....	21.7	.....	53.1	.....	23 37.40	+ 0.71	} 42.59 {	+ 42.53	7 24 20.64
	$\alpha$ Geminorum follow. ....	6.4	.....	37.7	.....	9.3	23 37.80	+ 0.71		+ 42.53	7 24 21.04
	$\alpha$ Canis Minoris .....	43.6	57.0	10.4	23.7	37.0	30 10.34	+ 1.04	42.45	+ 42.55	7 30 53.93
	$\beta$ Geminorum .....	16.0	31.1	46.0	1.1	16.1	34 46.06	+ 0.78	42.42	+ 42.55	7 35 29.39



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Jan. 30	$\lambda$ Leonis .....	20.7	35.3	49.7	4.2	18.8	21	49.74	+ 0.84	.....	+42.72	9 22 33.30
	$\phi$ Leonis .....	24.2	37.6	51.1	4.6	18.2	31	51.14	+ 0.99	.....	+42.73	9 32 34.86
	$\epsilon$ Leonis .....	31.2	45.7	0.3	14.8	29.5	36	0.30	+ 0.83	+42.87	+42.74	9 36 43.87
	Moon 2 Limb .....	7.2	21.3	35.6	49.5	3.6	0	35.44	+ 0.98	.....	+42.78	10 1 19.20
	$\xi$ Leonis .....	10.4	24.0	37.4	51.1	4.5	23	37.48	+ 1.00	.....	+42.81	10 24 21.29
	53 Leonis.....	38.0	51.6	5.1	18.6	32.1	40	5.08	+ 0.98	.....	+42.84	10 40 48.90
Jan. 31	Sun 1 Limb .....	32.6	46.7	0.7	14.8	28.7	52	0.70	+ 1.13	.....	+43.78	20 52 45.61
	Sun 2 Limb .....	49.4	3.4	17.3	31.4	45.2	54	17.34	+ 1.13	.....	+43.78	20 55 2.25
	$\theta$ Cassiopeæ .....	49.6	12.3	35.0	57.7	20.5	0	35.02	+ 0.21	.....	+44.16	1 1 19.39
	$\alpha$ Ursæ Minoris.....	26.0	40.0	.....	6.0	.....	0	52.97	-21.55	.....	+44.16	.....
	$\theta^1$ Ceti.....	46.6	0.0	13.4	26.7	40.3	15	13.40	+ 1.06	+44.16	+44.19	1 15 58.65
	47 Ceti.....	42.5	56.1	9.7	23.4	37.0	18	9.74	+ 1.09	.....	+44.19	1 18 55.02
	$\epsilon$ Cassiopeæ .....	9.5	38.7	7.8	37.0	6.3	42	7.86	- 0.12	.....	+44.23	1 42 51.97
	$\alpha$ Arietis.....	52.6	7.2	21.5	35.9	50.3	57	21.50	+ 0.76	44.36	+44.25	1 58 6.51
	$\phi$ Ceti.....	1.3	14.5	28.0	41.2	54.5	10	27.90	+ 1.01	.....	+44.27	2 11 13.18
	70 Ceti.....	48.9	2.3	15.4	28.7	42.0	13	15.46	+ 1.00	.....	+44.28	2 14 0.74
	71 Ceti.....	38.5	52.3	5.4	18.6	32.1	16	5.38	+ 1.01	.....	+44.28	2 16 50.67
	$\sigma$ Ceti.....	14.7	28.5	42.4	56.3	10.1	23	42.40	+ 1.12	.....	+44.29	2 24 27.81
	$\epsilon$ Ceti.....	34.5	48.2	1.7	15.4	29.0	31	1.76	+ 1.12	.....	+44.30	2 31 47.18
	$\alpha$ Aurigæ.....	26.7	45.9	4.9	24.2	43.5	4	5.04	+ 0.43	44.43	+44.54	5 4 50.01
	$\beta$ Tauri.....	53.0	8.1	23.2	38.4	53.4	15	23.22	+ 0.69	44.57	+44.56	5 16 8.47
	$\delta$ Orionis.....	36.3	49.5	2.6	15.8	29.2	23	2.68	+ 0.98	44.59	+44.57	5 23 48.23
	$\delta$ Ursæ Minoris.....	49.5	33.0	16.0	59.5	42.5	23	16.10	- 8.83	.....	+45.77	18 23 53.04
Feb. 1	Sun 1 Limb.....	35.8	49.7	3.6	17.4	31.4	56	3.58	+ 1.07	.....	+46.01	20 56 50.66
	Sun 2 Limb.....	52.2	6.2	20.0	33.8	47.7	58	19.98	+ 1.07	.....	+46.01	20 59 7.06
	$\zeta$ Cygni.....	46.7	1.8	17.2	32.4	47.6	5	17.14	+ 0.65	+45.99	+46.03	21 6 3.82
	$\alpha$ Pegasi .....	29.4	43.2	56.9	10.7	24.4	55	56.92	+ 0.81	46.09	+46.19	22 56 43.92
	$\alpha$ Ursæ Minoris .....	23.0	36.5	49.0	2.0	.....	0	49.42	-20.84	.....	+46.39	1 1 14.97
	$\epsilon$ Cassiopeæ.....	7.5	36.5	5.6	34.7	3.8	42	5.62	- 0.13	.....	+46.45	1 42 51.94
	$\alpha$ Arietis.....	50.6	5.2	19.5	33.8	48.2	57	19.46	+ 0.72	46.43	+46.47	1 58 6.65
	63 Ceti.....	11.7	25.0	38.3	51.7	4.9	2	38.32	+ 0.96	.....	+46.48	2 3 25.76
	9 Persei .....	37.0	0.3	23.5	46.7	10.2	10	23.54	+ 0.17	.....	+46.49	2 11 10.20
	47 Tauri.....	57.7	11.1	24.7	37.8	51.4	4	24.54	+ 0.86	.....	+46.66	4 5 12.06
	$\mu$ Tauri.....	34.0	47.7	1.1	14.6	28.0	6	1.08	+ 0.86	.....	+46.67	4 6 48.61
	$\alpha$ Tauri.....	27.2	40.7	54.4	8.6	22.2	25	54.62	+ 0.79	46.89	+46.69	4 26 42.10
Feb. 2	Sun 1 Limb.....	37.8	51.9	5.7	19.5	33.6	0	5.70	+ 1.09	.....	+48.19	21 0 54.98
	Sun 2 Limb.....	54.2	8.1	21.8	35.8	49.6	2	21.90	+ 1.09	.....	+48.19	21 3 11.18
	Venus 1 Limb.....	6.4	20.1	33.8	47.7	1.4	46	33.88	+ 1.07	.....	+48.26	21 47 23.21
	$\zeta$ Pegasi .....	9.1	22.6	36.1	49.4	3.0	32	36.04	+ 0.86	+48.17	+48.33	22 33 25.23
	$\alpha$ Pegasi .....	27.2	40.9	54.7	8.4	22.2	55	54.68	+ 0.83	48.31	+48.36	22 56 43.87
	$\alpha$ Ursæ Minoris .....	.....	.....	.....	0.5	14.0	0	46.80	-21.20	.....	+48.55	.....
	$\beta$ Orionis.....	32.4	45.7	59.2	12.5	26.0	5	59.16	+ 1.02	49.15	+48.92	5 6 49.10
	$\beta$ Tauri.....	48.6	3.7	18.8	34.0	49.1	15	18.84	+ 0.68	48.94	+48.94	5 16 8.46
Feb. 4	$\alpha$ Tauri.....	20.8	34.6	48.5	2.3	16.1	25	48.46	+ 0.68	+53.12	+53.19	4 26 42.33
	10 Camelopardi.....	22.5	49.4	15.9	42.7	9.5	48	16.00	0.00	.....	+53.22	4 49 9.22
	$\alpha$ Aurigæ.....	18.2	37.2	56.1	15.3	34.3	3	56.22	+ 0.35	53.26	+53.25	5 4 49.82
	$\beta$ Orionis.....	28.6	42.0	55.4	8.6	22.2	5	55.36	+ 0.85	53.09	+53.25	5 6 49.46
	$\delta$ Geminorum.....	9.0	23.4	37.8	52.2	6.6	9	37.80	+ 0.63	53.52	+53.43	7 10 31.86
	$\alpha$ Geminorum preced.	.....	10.8	.....	42.3	.....	23	26.55	+ 0.53	{ 53.57 }	+53.45	7 24 20.53
	$\alpha$ Geminorum follow.	55.6	.....	27.1	.....	58.5	23	27.07	+ 0.53		+53.45	7 24 21.05
	$\alpha$ Canis Minoris.....	32.8	46.2	59.6	13.0	26.3	29	59.58	+ 0.76	53.49	+53.46	7 30 53.80
	$\delta$ Ursæ Minoris.....	41.5	25.0	8.0	51.0	34.0	23	7.90	- 7.62	.....	+54.38	18 23 54.66
Feb. 5	Sun 1 Limb.....	40.4	54.0	7.8	21.8	35.7	12	7.94	+ 0.91	.....	+54.61	21 13 3.46

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpol- ated.	
Feb. 5	Sun 2 Limb.....	<sup>s.</sup> 55.5	<sup>s.</sup> 9.6	<sup>s.</sup> 23.3	<sup>s.</sup> 37.3	<sup>s.</sup> 51.1	<sup>m.</sup> 14	<sup>s.</sup> 23.36	+ 0.91	.....	+ 54.61	<sup>h.</sup> 21 <sup>m.</sup> 15 <sup>s.</sup> 18.88
	Venus 1 Limb.....	.....	50.4	4.2	17.8	31.5	1	4.12	+ 0.89	.....	+ 54.68	22 1 59.69
	$\alpha$ Arietis.....	42.4	56.7	11.1	25.5	39.8	57	11.10	+ 0.63	+ 54.82	+ 55.01	1 58 6.74
	9 Persei.....	28.9	52.2	15.4	38.7	1.8	10	15.40	+ 0.15	.....	+ 55.03	2 11 10.58
	69 Ceti.....	19.8	33.2	46.4	59.7	13.0	12	46.42	+ 0.80	.....	+ 55.03	2 13 42.25
	71 Ceti.....	28.4	41.5	54.8	8.3	21.6	15	54.92	+ 0.82	.....	+ 55.04	2 16 50.78
	$\sigma$ Ceti.....	4.4	18.2	32.0	45.8	59.6	23	32.00	+ 0.91	.....	+ 55.05	2 24 27.96
	$\epsilon$ Ceti.....	24.1	37.5	51.1	4.7	18.4	30	51.16	+ 0.88	.....	+ 55.06	2 31 47.10
	$\gamma^1$ Eridani.....	52.7	6.4	19.5	33.2	46.5	52	19.66	+ 0.85	.....	+ 55.09	2 53 15.60
	$\alpha$ Aurigæ.....	16.0	35.2	54.3	13.2	32.2	3	54.18	+ 0.35	55.28	+ 55.27	5 4 49.80
	$\beta$ Orionis.....	26.2	39.7	53.1	6.5	20.0	5	53.10	+ 0.85	55.34	+ 55.28	5 6 49.23
	$\beta$ Tauri.....	42.2	57.4	12.5	27.6	42.7	15	12.48	+ 0.57	55.37	+ 55.29	5 16 8.34
	$\delta$ Orionis.....	25.4	38.7	52.1	5.5	18.6	22	52.06	+ 0.80	55.34	+ 55.30	5 23 48.16
	$\delta$ Ursæ Min. S. P. ....	25.0	6.5	49.5	32.0	16.0	22	49.80	+ 9.46	.....	+ 55.39	6 23 54.65
	Groombridge 1119....	12.0	40.5	3.5	32.0	3.0	43	6.20	- 30.08	.....	+ 55.42	6 43 31.54
Feb. 6	Sun 1 Limb.....	39.2	53.0	7.1	20.8	34.4	16	6.90	+ 0.90	.....	+ 56.69	21 17 4.49
	Sun 2 Limb.....	54.3	8.2	22.1	36.0	49.8	18	22.08	+ 0.90	.....	+ 56.69	21 19 19.67
	$\alpha$ Ursæ Minoris.....	.....	.....	.....	43.0	1.0	0	31.65	- 18.01	.....	+ 57.01	1 1 10.65
	Vesta.....	.....	11.4	25.5	40.3	54.5	58	25.65	+ 0.61	.....	+ 57.45	5 59 23.71
	$\mu$ Geminorum.....	47.7	1.8	16.8	31.2	45.5	12	16.60	+ 0.63	+ 57.53	+ 57.47	6 13 14.70
	$\delta$ Ursæ Min. S. P. ....	20.5	3.0	46.5	29.5	12.0	22	46.30	+ 9.46	.....	+ 57.48	6 23 53.24
	$\alpha$ Canis Majoris.....	38.4	52.5	6.6	20.2	34.0	37	6.34	+ 0.91	57.43	+ 57.51	6 38 4.76
	$\delta$ Geminorum.....	5.0	19.4	33.8	48.1	2.5	9	33.76	+ 0.63	57.56	+ 57.56	7 10 31.95
	20 Libræ.....	11.6	26.2	40.7	55.4	9.9	53	40.76	+ 0.77	.....	+ 58.26	14 54 39.79
	$\gamma^1$ Libræ.....	36.5	50.4	4.4	18.5	32.6	2	4.48	+ 0.74	.....	+ 58.27	15 3 3.49
	$\beta$ Libræ.....	55.6	8.8	22.2	35.7	49.2	7	22.30	+ 0.69	+ 58.40	+ 58.28	15 8 21.27
	Moon 2 Limb.....	16.4	31.3	46.3	1.1	15.9	18	46.20	+ 0.79	.....	+ 58.30	15 19 45.29
	$\alpha$ Coronæ borealis....	24.1	39.0	53.7	8.8	23.6	26	53.84	+ 0.46	58.43	+ 58.31	15 27 52.61
	$\alpha$ Serpentis.....	55.0	8.4	21.7	35.2	48.6	35	21.78	+ 0.60	58.39	+ 58.33	15 36 20.71
	1 Scorpii.....	50.0	4.8	19.3	34.1	48.6	40	19.36	+ 0.77	.....	+ 58.33	15 41 18.46
	$\delta$ Scorpii.....	21.5	36.0	50.2	4.7	18.9	49	50.26	+ 0.76	.....	+ 58.35	15 50 49.37
Feb. 7	Sun 1 Limb.....	37.3	51.2	5.3	19.1	32.8	20	5.14	+ 0.72	.....	+ 58.84	21 21 4.70
	$\alpha$ Aurigæ.....	12.1	31.1	50.1	9.2	28.4	3	50.18	+ 0.27	59.33	+ 59.46	5 4 49.91
	$\beta$ Tauri.....	38.2	53.3	8.5	23.5	38.6	15	8.42	+ 0.46	59.52	+ 59.48	5 16 8.36
	$\delta$ Ursæ Min. S. P. ....	21.0	4.0	.....	29.5	12.0	22	46.68	+ 7.96	.....	+ 59.57	.....
Feb. 8	$\alpha$ Arietis.....	36.2	50.5	4.8	19.2	33.6	57	4.86	+ 0.52	+ 61.13	+ 61.13	.....
	33 Arietis.....	46.4	1.2	16.0	30.6	45.7	30	15.98	+ 0.48	.....	+ 61.17	2 31 17.63
INSTRUMENT REVERSED.												
Feb. 9	$\delta$ Ursæ Minoris.....	27.0	10.0	53.5	36.5	.....	22	53.25	- 2.39	.....	+ 63.91	.....
	$\alpha$ Lyræ.....	49.6	6.6	23.6	40.6	57.6	30	23.60	+ 0.69	+ 63.93	+ 63.92	18 31 28.21
Feb. 11	$\beta$ Lyræ.....	30.7	46.6	2.6	18.5	34.4	43	2.56	+ 0.72	63.93	+ 63.94	18 44 7.22
	$\beta$ Orionis.....	14.8	28.4	41.6	55.1	8.5	5	41.68	+ 0.86	+ 66.68	+ 66.64	5 6 49.18
	$\beta$ Tauri.....	31.0	46.2	1.2	16.3	31.4	15	1.22	+ 0.61	66.52	+ 66.65	5 16 8.48
	$\delta$ Orionis.....	14.1	27.4	40.7	53.9	7.2	22	40.66	+ 0.80	66.68	+ 66.66	5 23 48.12
	$\epsilon$ Orionis.....	29.8	43.0	56.4	9.7	22.9	26	56.36	+ 0.81	66.74	+ 66.67	5 28 3.84
	Vesta.....	39.9	54.5	.....	.....	38.4	57	9.12	+ 0.64	.....	+ 66.71	5 58 16.47
	$\mu$ Geminorum.....	38.5	53.0	7.4	21.6	36.3	12	7.36	+ 0.65	66.71	+ 66.73	6 13 14.74
	$\delta$ Ursæ Min. S. P. ....	17.0	1.0	43.0	26.0	9.0	22	43.20	+ 5.22	.....	+ 66.75	.....
Feb. 12	Sun 1 Limb.....	18.5	32.1	46.0	59.5	13.3	39	45.88	+ 0.84	.....	+ 68.03	21 40 54.75
	Sun 2 Limb.....	32.2	46.2	59.8	13.6	27.4	41	59.84	+ 0.84	.....	+ 68.03	21 43 8.71



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
Feb. 12	$\alpha$ Andromedæ .....	24.7	39.7	54.7	9.8	25.0	58 54.78	+ 0.59	+ 68.33	+ 68.23	h. m. s. 0 0 3.60
	$\gamma$ Pegasi .....	20.0	33.7	47.4	1.2	14.8	3 47.42	+ 0.67	68.34	+ 68.23	0 4 56.32
	$\alpha$ Ursæ Minoris .....	.....	.....	.....	20.0	33.0	0 6.35	- 7.89	.....	+ 68.32	1 1 6.78
	$\alpha$ Ceti .....	16.7	30.0	43.4	56.6	10.1	52 43.36	+ 0.73	68.37	+ 68.47	2 53 52.56
	12 Tauri .....	53.1	6.4	19.6	33.0	46.5	30 19.72	+ 0.73	.....	+ 68.52	3 31 28.97
	$\pi$ Eridani .....	56.2	9.7	23.4	37.2	50.7	37 23.44	+ 0.83	.....	+ 68.53	3 38 32.80
	47 Eridani .....	51.2	4.5	18.0	31.5	44.8	25 18.00	+ 0.80	.....	+ 68.59	4 26 27.39
	8 Orionis .....	17.3	30.5	43.8	57.0	10.4	44 43.80	+ 0.73	.....	+ 68.62	4 45 53.15
	$\epsilon$ Aurigæ .....	41.4	59.6	17.8	36.2	54.5	49 17.90	+ 0.47	.....	+ 68.63	4 50 27.00
	$\alpha$ Aurigæ .....	2.6	21.7	40.7	59.7	18.8	3 40.70	+ 0.45	68.54	+ 68.64	5 4 49.79
	$\beta$ Orionis .....	12.7	26.3	39.7	53.2	6.7	5 39.72	+ 0.80	68.68	+ 68.65	5 6 49.17
	Vesta .....	30.6	45.1	59.7	14.2	28.8	56 59.68	+ 0.61	.....	+ 68.72	5 58 9.01
	$\delta$ Ursæ Min. S. P. ....	.....	59.0	40.0	25.0	8.5	22 41.62	+ 4.50	.....	+ 68.75	6 23 54.87
	Groombridge 1119 ....	35.0	4.0	32.0	0.0	28.0	42 31.80	- 13.33	.....	+ 68.77	6 43 27.24
	$\delta$ Ursæ Minoris .....	22.5	6.0	.....	33.0	15.5	22 49.30	- 3.18	.....	+ 69.68	18 23 55.80
Feb. 13	Sun 1 Limb .....	12.5	26.3	39.8	53.4	7.1	43 39.82	+ 0.86	.....	+ 69.94	21 44 50.62
	Sun 2 Limb .....	26.0	39.7	53.6	7.1	20.7	45 53.42	+ 0.86	.....	+ 69.94	21 47 4.22
	Venus 1 Limb .....	.....	42.5	56.3	9.8	23.3	38 56.21	+ 0.83	.....	+ 70.01	22 40 7.05
	$\alpha$ Andromedæ .....	22.8	37.8	52.8	8.0	23.2	58 52.92	+ 0.61	+ 70.16	+ 70.12	0 0 3.65
	$\gamma$ Pegasi .....	18.3	32.0	45.6	59.3	13.1	3 45.66	+ 0.69	70.07	+ 70.12	0 4 56.47
	$\alpha$ Ursæ Minoris .....	37.5	50.0	4.5	17.0	31.5	0 4.10	- 7.87	.....	+ 70.19	1 1 6.42
	$\alpha$ Lyrae .....	42.5	59.5	16.4	33.5	50.5	30 16.48	+ 0.55	+ 71.30	+ 71.34	18 31 28.37
	$\beta$ Lyrae .....	23.6	39.5	55.4	11.3	27.2	42 55.40	+ 0.58	71.33	+ 71.35	18 44 7.33
Feb. 14	Sun 2 Limb .....	19.1	32.7	46.4	0.1	13.7	49 46.40	+ 0.85	.....	+ 71.56	21 50 58.81
	$\alpha$ Andromedæ .....	21.1	36.2	51.4	6.4	21.5	58 51.32	+ 0.62	71.75	+ 71.70	0 0 3.64
	$\gamma$ Pegasi .....	16.5	30.2	43.8	57.6	11.4	3 43.90	+ 0.70	71.82	+ 71.71	0 4 56.31
	$\alpha$ Ursæ Minoris .....	35.0	47.0	2.0	13.5	27.0	0 0.90	- 7.12	.....	+ 71.77	1 1 5.55
	$\zeta$ Aurigæ .....	27.8	45.5	2.6	20.5	37.7	50 2.82	+ 0.54	.....	+ 72.05	4 51 15.41
	$\beta$ Orionis .....	9.4	22.8	36.2	49.7	3.1	5 36.24	+ 0.82	72.11	+ 72.07	5 6 49.13
	$\beta$ Tauri .....	25.5	40.7	55.7	10.8	25.9	14 55.72	+ 0.62	71.97	+ 72.08	5 16 8.42
	$\delta$ Orionis .....	8.8	22.0	35.4	48.6	1.9	22 35.34	+ 0.77	71.98	+ 72.09	5 23 48.20
	Vesta .....	18.2	32.7	47.3	1.8	16.5	56 47.30	+ 0.63	.....	+ 72.14	5 58 0.07
	$\delta$ Ursæ Min. S. P. ....	.....	57.0	40.0	22.0	5.5	22 39.65	+ 4.19	.....	+ 72.17	6 23 56.01
Feb. 15	Groombridge 1119 ....	28.0	57.0	26.5	55.0	27.0	42 26.70	- 12.09	.....	+ 72.19	6 43 26.80
	$\delta$ Ursæ Minoris .....	20.5	2.5	46.0	28.5	11.5	22 45.80	- 2.83	.....	+ 73.04	18 23 56.01
	Sun 1 Limb .....	58.1	11.9	25.5	39.0	52.7	51 25.44	+ 0.87	.....	+ 73.29	21 52 39.60
	Sun 2 Limb .....	11.3	24.8	38.6	52.7	6.2	53 38.72	+ 0.87	.....	+ 73.29	21 54 52.88
	Venus 1 Limb .....	47.7	1.2	14.7	28.2	41.6	48 14.68	+ 0.84	.....	+ 73.36	22 49 28.88
	$\alpha$ Pegasi .....	2.2	16.0	29.7	43.5	57.2	55 29.72	+ 0.72	+ 73.37	+ 73.37	.....
	$\alpha$ Ursæ Minoris .....	32.0	45.0	0.0	13.0	26.5	59 59.30	- 7.10	.....	+ 73.49	1 1 5.69
	$\alpha$ Ursæ Minoris .....	28.0	41.0	56.0	8.5	22.0	59 55.10	- 5.25	.....	+ 74.92	.....
	(a) $\beta$ Orionis .....	6.1	19.6	32.8	46.4	59.8	6 32.94	+ 0.83	+ 15.38	+ 15.16	5 6 48.93
	$\beta$ Tauri .....	22.5	37.4	52.6	7.7	22.8	15 52.60	+ 0.66	15.00	+ 15.17	5 16 8.43
Feb. 16	$\alpha$ Orionis .....	45.8	59.2	12.7	26.1	39.6	46 12.68	+ 0.76	15.18	+ 15.20	5 46 28.64
	Vesta .....	13.7	28.3	43.0	57.6	12.1	57 42.94	+ 0.68	.....	+ 15.21	5 57 58.83
	$\mu$ Geminorum .....	29.9	44.4	58.8	13.2	27.6	12 58.78	+ 0.68	15.20	+ 15.23	6 13 14.69
	$\delta$ Geminorum .....	47.2	1.6	16.0	30.3	44.6	10 15.94	+ 0.69	15.27	+ 15.31	7 10 31.94
	Sun 1 Limb .....	31.4	44.2	58.3	12.1	25.7	3 58.34	+ 1.01	.....	+ 18.32	22 4 17.67
	Sun 2 Limb .....	43.8	57.4	11.0	24.6	38.2	6 11.00	+ 1.01	.....	+ 18.32	22 6 30.33
Feb. 18	$\alpha$ Pegasi .....	57.2	10.8	24.5	38.3	51.8	56 24.52	+ 0.84	+ 18.46	+ 18.38	22 56 43.74
	Venus 1 Limb .....	39.0	52.6	5.9	19.4	32.8	3 5.94	+ 0.99	.....	+ 18.39	23 3 25.32
	$\alpha$ Andromedæ .....	14.4	29.5	44.6	59.7	14.7	59 44.58	+ 0.75	18.33	+ 18.47	0 0 3.80
	$\gamma$ Pegasi .....	9.7	23.4	37.1	50.8	4.6	4 37.12	+ 0.84	18.44	+ 18.47	0 4 56.43

(a) Clock put forward one minute.



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock observed. interpo- lated.		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.						
Feb. 18	$\alpha$ Ursæ Minoris.....	28.5	41.0	54.0	7.0	21.0	0	54.30	- 9.19	.....	+18.54	.....
	$\phi$ Piscium.....	7.2	20.8	34.2	47.8	1.4	36	34.28	+ 0.87	.....	+18.59	1 36 53.74
	Moon 1 Limb.....	27.9	42.0	56.2	10.2	24.4	49	56.14	+ 0.86	.....	+18.61	1 50 15.61
	$\alpha$ Arietis.....	18.2	32.6	46.8	1.4	15.8	57	46.96	+ 0.78	+18.64	+18.63	1 58 6.37
	$\gamma$ Arietis.....	53.3	7.4	21.5	35.7	50.2	29	21.62	+ 0.80	.....	+18.67	2 29 41.09
	$\gamma$ Ceti.....	11.7	25.1	38.3	51.5	4.8	34	38.28	+ 0.91	18.75	+18.68	2 34 57.87
	$\phi$ Eridani.....	14.8	28.2	41.5	54.9	8.4	3	41.56	+ 0.97	.....	+18.80	4 4 1.33
	40 Eridani.....	6.0	19.4	32.7	45.8	59.5	7	32.68	+ 0.99	.....	+18.81	4 7 52.48
	47 Eridani.....	40.7	54.1	7.7	21.0	34.5	26	7.60	+ 0.99	.....	+18.84	4 26 27.43
	Vesta.....	16.8	31.3	45.8	0.5	15.0	57	45.88	+ 0.77	.....	+18.97	5 58 5.62
	$\delta$ Ursæ Minoris.....	13.0	57.0	40.0	23.0	6.5	23	39.90	- 2.78	.....	+20.01	.....
Feb. 19	Sun 1 Limb.....	20.2	34.0	47.7	1.2	14.8	7	47.58	+ 0.90	.....	+20.32	22 8 8.80
	Sun 2 Limb.....	32.7	46.3	0.0	13.6	27.2	9	59.96	+ 0.90	.....	+20.32	22 10 21.18
	Venus 1 Limb.....	.....	27.7	41.1	.....	7.9	7	41.09	+ 0.88	.....	+20.41	23 8 2.38
	Moon 1 Limb.....	45.8	0.4	15.1	29.6	44.1	47	15.00	+ 0.76	.....	+20.71	2 47 36.47
	$\delta$ Arietis.....	36.4	50.4	4.5	18.6	32.6	2	4.50	+ 0.74	.....	+20.73	3 2 25.97
Feb. 20	Sun 1 Limb.....	8.8	22.5	36.1	49.7	3.3	11	36.08	+ 1.13	.....	+22.35	22 11 59.56
	Sun 2 Limb.....	21.0	34.6	48.2	1.8	15.4	13	48.20	+ 1.13	.....	+22.35	22 14 11.68
	$\alpha$ Aurigæ.....	47.8	6.8	25.9	45.1	4.0	4	25.92	+ 0.63	+22.98	+22.92	5 4 49.47
	$\beta$ Orionis.....	58.1	11.5	25.1	38.6	51.8	6	25.02	+ 1.11	22.96	+22.93	5 6 49.06
	$\mu$ Geminorum.....	22.0	36.4	50.7	5.2	19.6	12	50.78	+ 0.86	22.98	+23.02	6 13 14.66
	$\alpha$ Canis Majoris.....	12.6	26.6	40.4	54.3	8.2	37	40.42	+ 1.13	22.98	+23.07	6 38 4.62
Feb. 21	$\beta$ Geminorum.....	32.6	47.8	2.8	18.0	33.1	35	2.86	+ 0.84	+25.51	+25.52	7 35 29.22
	$\epsilon$ Hydræ.....	23.0	36.6	49.9	3.3	16.5	37	49.86	+ 1.03	25.63	+25.62	8 38 16.51
	$\alpha$ Cygni.....	49.9	8.7	27.5	46.2	4.8	35	27.42	+ 0.66	+26.90	+26.68	20 35 54.76
Feb. 22	Sun 1 Limb.....	43.3	56.8	10.5	24.1	37.6	19	10.46	+ 1.24	.....	+26.83	22 19 38.53
	Sun 2 Limb.....	55.3	8.8	22.4	35.8	49.5	21	22.36	+ 1.24	.....	+26.83	22 21 50.43
	$\delta$ Persei.....	22.3	41.7	1.5	20.8	40.6	31	1.38	+ 0.63	.....	+27.30	3 31 29.31
	A. S. C. 416.....	52.7	7.2	21.5	35.8	50.3	38	21.50	+ 0.92	.....	+27.31	3 38 49.73
	$\phi$ Eridani.....	5.7	19.1	32.4	45.8	9.3	3	32.46	+ 1.24	.....	+27.35	4 4 1.05
	$\mu$ Tauri.....	53.0	6.4	19.7	33.2	46.7	6	19.80	+ 1.06	.....	+27.35	4 6 48.21
	$\alpha$ Aurigæ.....	43.3	2.4	21.5	40.4	59.5	4	21.42	+ 0.65	27.42	+27.45	5 4 49.52
	$\beta$ Orionis.....	53.6	7.1	20.6	33.8	47.4	6	20.50	+ 1.22	27.34	+27.45	5 6 49.17
	$\beta$ Tauri.....	9.7	24.8	39.9	55.1	10.2	15	39.94	+ 0.87	27.38	+27.46	5 16 8.27
	$\delta$ Orionis.....	53.0	6.2	19.5	32.6	45.8	23	19.42	+ 1.14	27.42	+27.48	5 23 48.04
	$\epsilon$ Orionis.....	8.5	21.8	35.4	48.4	1.7	27	35.16	+ 1.15	27.45	+27.48	5 28 3.79
	52 Orionis.....	27.2	40.6	53.8	7.2	20.5	38	53.86	+ 1.08	.....	+27.50	5 39 22.44
	136 Tauri.....	15.5	30.5	45.6	0.4	15.6	42	45.52	+ 0.88	.....	+27.50	5 43 13.90
	Moon 1 Limb.....	31.4	46.8	2.4	18.0	33.6	53	2.44	+ 0.90	.....	+27.52	5 53 30.86
	$\alpha$ Aurigæ.....	.....	.....	40.2	55.5	10.7	4	40.20	+ 0.85	.....	+27.51	6 5 8.59
	$\delta$ Ursæ Min. S. P. ....	.....	40.0	22.0	5.5	48.5	23	22.55	+ 8.08	.....	+27.57	.....
	$\epsilon$ Geminorum.....	5.1	19.7	34.5	49.4	3.8	33	34.50	+ 0.90	.....	+27.59	6 34 2.99
Feb. 23	Sun 1 Limb.....	29.8	43.3	56.8	10.4	23.9	22	56.84	+ 1.13	.....	+29.10	22 23 27.07
	Sun 2 Limb.....	41.5	55.0	8.6	22.1	35.7	25	8.58	+ 1.13	.....	+29.10	22 25 38.81
	Venus 1 Limb.....	27.2	40.5	53.9	7.4	20.8	25	53.96	+ 1.09	.....	+29.20	23 26 24.25
	$\alpha$ Andromedæ.....	3.5	18.6	33.6	48.7	3.8	59	33.64	+ 0.81	+29.19	+29.26	0 0 3.71
	$\gamma$ Pegasi.....	58.8	12.3	26.2	39.8	53.6	4	26.14	+ 0.94	29.30	+29.26	0 4 56.34
	$\alpha$ Ursæ Minoris.....	16.0	29.0	.....	56.5	9.5	0	42.80	-12.78	.....	+29.35	1 0 59.37
	$\alpha$ Arietis.....	7.3	21.5	35.7	50.2	4.7	57	35.88	+ 0.85	29.58	+29.44	1 58 6.17
	$\delta$ Persei.....	20.1	39.5	59.3	18.7	38.5	30	59.22	+ 0.59	.....	+29.59	3 31 29.40
	A. S. C. 416.....	50.6	4.8	19.3	33.7	48.3	38	19.34	+ 0.85	.....	+29.60	3 38 49.79
	$\xi$ Persei.....	29.4	45.6	1.8	18.3	34.5	48	1.92	+ 0.74	.....	+29.61	3 48 32.27
	$\gamma^1$ Eridani.....	33.5	47.3	0.8	14.6	28.3	50	0.90	+ 1.17	29.61	+29.62	3 50 31.69

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	h.	m.	s.
Feb. 23	o Eridani.....	3.6	16.8	30.2	43.5	57.0	m. s. 3 30.22	+ 1.11	.....	+29.63	4	4	0.96
	A. S. C. 467.....	58.6	19.2	39.7	0.4	20.8	5 39.74	+ 0.55	.....	+29.64	4	6	9.93
	16 Orionis.....	21.7	45.3	58.6	12.2	25.7	59 58.70	+ 0.97	.....	+29.71	5	0	29.38
	μ Aurigæ.....	22.1	38.8	55.8	13.8	29.7	1 56.04	+ 0.71	.....	+29.71	5	2	26.46
	ε Leporis.....	50.3	3.7	17.5	31.1	44.6	4 17.44	+ 1.15	.....	+29.72	5	4	48.31
	18 Orionis.....	10.8	24.4	38.1	51.5	5.2	6 38.00	+ 0.96	.....	+29.72	5	7	8.68
	τ Orionis.....	51.1	4.4	17.7	31.0	44.4	9 17.72	+ 1.11	.....	+29.72	5	9	48.55
	λ Leporis.....	12.4	26.2	39.6	53.3	7.2	11 39.74	+ 1.17	.....	+29.73	5	12	10.64
	23 Orionis.....	26.3	39.5	52.8	6.2	19.4	13 52.84	+ 1.02	.....	+29.73	5	14	23.59
	27 Orionis.....	21.6	34.8	48.2	1.5	14.7	15 48.16	+ 1.06	.....	+29.73	5	16	18.95
	ψ <sup>2</sup> Orionis.....	28.0	41.3	54.5	7.8	21.2	17 54.56	+ 1.02	.....	+29.74	5	18	25.32
	31 Orionis.....	37.4	50.6	3.8	17.0	30.4	21 3.84	+ 1.06	.....	+29.74	5	21	34.64
	ν Orionis.....	12.2	25.5	39.0	52.3	5.7	23 38.94	+ 1.11	.....	+29.75	5	24	9.80
	φ <sup>1</sup> Orionis.....	2.4	16.0	29.5	42.8	56.4	25 29.42	+ 0.97	.....	+29.75	5	26	0.14
	ε Orionis.....	6.3	19.6	32.8	46.2	59.5	27 32.88	+ 1.06	+29.81	+29.75	5	28	3.69
	σ Orionis.....	43.6	56.8	10.2	23.5	36.8	30 10.18	+ 1.08	.....	+29.76	5	30	41.02
	ζ Orionis.....	41.8	55.1	8.4	21.7	34.9	32 8.38	+ 1.06	.....	+29.76	5	32	39.20
	ζ Leporis.....	42.5	56.2	9.8	23.7	37.5	39 9.94	+ 1.18	.....	+29.77	5	39	40.89
	55 Orionis.....	39.4	52.6	5.9	19.3	32.7	43 5.98	+ 1.12	.....	+29.77	5	43	36.87
	δ Aurigæ.....	2.6	25.4	48.1	10.6	33.4	45 48.02	+ 0.47	.....	+29.78	5	46	18.27
	θ Aurigæ.....	32.0	58.8	15.5	32.4	48.8	48 15.50	+ 0.72	.....	+29.78	5	48	46.00
	2 Monocerotis.....	29.2	42.5	56.2	9.4	22.8	50 56.02	+ 1.13	.....	+29.79	5	51	26.94
	μ Orionis.....	35.3	48.6	2.2	15.6	29.2	53 2.18	+ 0.97	.....	+29.79	5	53	32.94
	Vesta.....	45.4	59.7	14.4	28.8	43.4	58 14.34	+ 0.84	.....	+29.80	5	58	44.98
	τ Leporis.....	43.4	57.2	11.7	25.7	39.8	0 11.56	+ 1.22	.....	+29.80	6	0	42.58
	κ Aurigæ.....	7.5	22.5	38.1	53.3	8.5	4 37.98	+ 0.80	.....	+29.81	6	5	8.59
	5 Monocerotis.....	3.7	17.2	30.6	43.9	57.3	6 30.54	+ 1.10	.....	+29.81	6	7	1.45
	δ Ursæ Min. S. P.....	55.0	36.5	19.0	3.5	45.5	23 19.90	+ 7.15	.....	+29.83	6	23	56.88
	14 Monocerotis.....	6.8	20.6	33.7	47.2	0.7	25 33.80	+ 0.98	.....	+29.83	6	26	4.61
	ε Geminorum.....	3.0	17.5	32.4	47.2	1.7	33 32.36	+ 0.84	.....	+29.84	6	34	3.04
	16 Monocerotis.....	49.3	2.7	16.2	29.7	43.1	37 16.20	+ 0.97	.....	+29.85	6	37	47.02
	θ Canis Majoris.....	45.8	59.4	13.2	26.6	40.3	46 13.06	+ 1.15	.....	+29.86	6	46	44.07
	Moon 1 Limb.....	38.4	53.2	9.1	24.7	39.9	55 9.06	+ 0.85	.....	+29.87	6	55	39.78
	63 Aurigæ.....	31.4	48.5	5.7	23.2	40.5	0 5.86	+ 0.69	.....	+29.88	7	0	36.43
	ε Geminorum.....	44.3	59.4	14.4	29.5	44.6	15 14.44	+ 0.81	.....	+29.90	7	15	45.15
	β Canis Minoris.....	28.8	42.4	55.7	9.2	22.6	17 55.74	+ 0.97	.....	+29.90	7	18	26.61
25 Monocerotis.....	20.4	33.7	47.1	0.2	13.5	28 46.98	+ 1.08	.....	+29.92	7	29	17.98	
β Geminorum.....	28.3	43.4	58.5	13.6	28.7	34 58.50	+ 0.81	29.88	+29.93	7	35	29.24	
π Canis Minoris.....	27.6	41.4	55.2	8.5	22.2	36 54.98	+ 0.96	.....	+29.93	7	37	25.87	
14 Canis Minoris.....	3.8	17.0	30.4	43.7	56.8	49 30.34	+ 1.02	.....	+29.95	7	50	1.31	
55 Camelopardi.....	3.0	40.2	17.0	53.7	30.8	56 16.94	+ 0.01	.....	+29.96	7	56	46.91	
Feb. 24	δ Geminorum.....	30.4	44.7	59.2	13.6	27.8	9 59.14	+ 0.84	+31.85	+31.88	7	10	31.86
	ε Geminorum.....	42.2	57.4	12.6	27.5	42.6	15 12.46	+ 0.79	.....	+31.89	7	15	45.14
	β Canis Minoris.....	26.8	40.2	53.7	7.2	20.5	17 53.68	+ 0.95	.....	+31.89	7	18	26.52
	α Geminorum preced.....	16.5	.....	48.0	.....	19.5	23 48.00	+ 0.75	31.83	+31.90	7	24	20.65
	α Geminorum follow.....	.....	32.7	.....	4.2	.....	23 48.45	+ 0.75		+31.90	7	24	21.10
	α Canis Minoris.....	54.1	7.5	20.8	34.1	47.5	30 20.80	+ 0.97		31.96	+31.91	7	30
	26 Monocerotis.....	34.7	48.4	1.7	15.3	28.6	33 1.74	+ 1.10	.....	+31.91	7	33	34.75
	β Geminorum.....	26.0	41.2	56.5	11.6	26.8	34 56.42	+ 0.78	31.98	+31.92	7	35	29.12
	4 Argûs.....	33.1	46.8	0.7	14.2	28.0	38 0.56	+ 1.14	.....	+31.92	7	38	33.62
	14 Canis Minoris.....	1.7	15.0	28.4	41.7	54.9	49 28.34	+ 0.99	.....	+31.94	7	50	1.27
	Moon 1 Limb.....	44.2	59.3	14.4	29.6	44.7	54 14.44	+ 0.83	.....	+31.94	7	54	47.21
	λ Cancrî.....	57.4	11.7	26.5	41.0	55.7	10 26.46	+ 0.82	.....	+31.97	8	10	59.25
	γ Cancrî.....	58.2	12.5	26.9	41.2	55.6	33 26.88	+ 0.84	.....	+32.01	8	33	59.73
	ε Hydræ.....	16.7	30.2	43.6	56.9	10.4	37 43.56	+ 0.97	31.97	+32.01	8	38	16.54
Feb. 25	Sun 1 Limb.....	0.8	14.3	27.8	41.5	54.8	30 27.84	+ 1.08	.....	+33.30	22	31	2.22



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	inter- polated.			
Feb. 25	Sun 2 Limb.....	12.4	25.8	39.2	52.7	6.2	32	39.26	+ 1.08	.....	+33.30	22 33	13.64	
	$\alpha$ Pegasi.....	42.0	55.8	9.4	23.4	37.0	56	9.52	+ 0.89	+33.43	+33.33	22 56	43.74	
	Venus 1 Limb.....	30.4	43.8	57.2	10.7	23.8	34	57.18	+ 1.03	.....	+33.39	23 35	31.60	
	$\alpha$ Ursæ Minoris.....	10.0	23.5	.....	.....	5.0	0	37.23	-11.72	.....	+33.53	1 0	59.04	
	$\alpha$ Arietis.....	2.8	17.4	31.7	46.2	0.6	57	31.74	+ 0.82	33.73	+33.61	1 58	6.17	
	A. S. C. 416.....	46.2	0.7	15.2	29.6	44.0	38	15.14	+ 0.82	.....	+33.77	3 38	49.73	
	$\gamma^1$ Eridani.....	29.2	43.0	56.7	10.4	24.2	49	56.70	+ 1.11	33.83	+33.78	3 50	31.59	
	$\mu$ Persei.....	52.3	12.0	31.8	51.7	11.6	2	31.88	+ 0.56	.....	+33.80	4 3	6.24	
	A. S. C. 467.....	54.5	14.8	35.7	56.4	16.8	5	35.64	+ 0.54	.....	+33.81	4 6	9.99	
	$\tau$ Orionis.....	46.8	0.2	13.4	26.7	40.2	9	13.46	+ 1.05	.....	+33.90	5 9	48.41	
	$\lambda$ Leporis.....	8.3	21.7	35.8	49.2	2.6	11	35.52	+ 1.11	.....	+33.91	5 12	10.54	
	23 Orionis.....	21.8	35.4	48.6	1.7	15.0	13	48.50	+ 0.97	.....	+33.91	5 14	23.38	
	27 Orionis.....	17.5	30.7	43.8	57.3	10.5	15	43.96	+ 1.01	.....	+33.91	5 16	18.88	
	$\psi^2$ Orionis.....	23.8	37.1	50.6	3.7	17.2	17	50.48	+ 0.97	.....	+33.92	5 18	25.37	
	31 Orionis.....	33.2	46.4	59.7	12.8	26.2	20	59.66	+ 1.01	.....	+33.92	5 21	34.59	
	$\nu$ Orionis.....	8.0	21.4	34.7	48.1	1.6	23	34.76	+ 1.05	.....	+33.93	5 24	9.74	
	$\phi^1$ Orionis.....	58.5	11.8	25.4	38.7	52.2	25	25.32	+ 0.92	.....	+33.93	5 26	0.17	
	$\epsilon$ Orionis.....	2.2	15.6	28.8	42.2	55.5	27	28.86	+ 1.01	33.84	+33.93	5 28	3.80	
	$\sigma$ Orionis.....	39.5	52.7	6.2	19.5	32.6	30	6.10	+ 1.03	.....	+33.94	5 30	41.07	
	$\zeta$ Orionis.....	37.8	51.0	4.3	17.6	30.9	32	4.32	+ 1.01	.....	+33.94	5 32	39.27	
	$\xi$ Leporis.....	38.2	52.0	5.7	19.5	33.3	39	5.74	+ 1.12	.....	+33.95	5 39	40.81	
	55 Orionis.....	35.0	48.4	1.8	15.3	28.6	43	1.82	+ 1.07	.....	+33.95	5 43	36.84	
	$\delta$ Aurigæ.....	58.5	21.1	43.7	6.6	29.5	45	43.88	+ 0.45	.....	+33.96	5 46	18.29	
	$\theta$ Aurigæ.....	38.2	54.7	11.5	28.1	44.8	48	11.46	+ 0.69	.....	+33.96	5 48	46.11	
	2 Monocerotis.....	24.8	38.5	51.9	5.4	18.8	50	51.88	+ 1.08	.....	+33.97	5 51	26.93	
	$\mu$ Orionis.....	31.1	44.4	57.9	11.4	24.8	52	57.92	+ 0.92	.....	+33.97	5 53	32.81	
	Vesta.....	22.6	36.8	51.7	6.5	20.8	58	51.68	+ 0.80	.....	+33.98	5 59	26.46	
	$\delta$ Ursæ Min. S. P. ....	.....	34.5	17.0	1.0	44.0	23	17.68	+ 6.60	.....	+34.02	6 23	58.30	
	$\psi^2$ Canis Majoris.....	29.4	42.8	56.6	10.4	24.2	38	56.68	+ 1.12	.....	+34.04	6 39	31.84	
	Groombridge 1119....	.....	36.0	2.0	29.0	1.0	43	2.70	-19.76	.....	+34.04	6 43	16.98	
	19 Monocerotis.....	54.8	8.2	21.6	34.8	48.2	54	21.52	+ 1.03	.....	+34.06	6 54	56.61	
	63 Aurigæ.....	27.3	44.5	1.7	18.8	36.3	0	1.72	+ 0.67	.....	+34.07	7 0	36.46	
	$\beta$ Canis Minoris.....	24.7	38.3	51.7	5.0	18.5	17	51.64	+ 0.93	.....	+34.10	7 18	26.67	
	$\alpha$ Geminorum preced.	.....	30.2	.....	1.6	.....	23	45.90	+ 0.75	33.95	+34.11	7 24	20.76	
	$\alpha$ Geminorum follow.	14.7	.....	46.4	.....	17.7	23	46.27	+ 0.75		+34.11	7 24	21.13	
	25 Monocerotis.....	16.2	29.5	42.7	56.1	9.4	28	42.78	+ 1.03		+34.11	7 29	17.92	
	$\pi$ Canis Minoris.....	23.8	37.4	50.8	4.4	18.0	36	50.88	+ 0.91	.....	+34.12	7 37	25.91	
	A. S. C. 968.....	46.2	59.7	13.2	26.6	40.1	46	13.16	+ 0.92	.....	+34.14	7 46	48.22	
	13 Argûs.....	53.4	6.5	19.7	33.2	46.5	53	19.86	+ 0.97	.....	+34.15	7 53	54.98	
	$\gamma$ Cancri.....	56.2	10.4	24.7	39.0	53.4	33	24.74	+ 0.83	.....	+34.21	8 33	59.78	
	Moon 1 Limb.....	49.0	3.5	18.2	32.7	47.5	49	18.18	+ 0.86	.....	+34.23	8 49	53.27	
	$\lambda$ Leonis.....	29.4	44.1	58.7	13.3	27.7	21	58.64	+ 0.81	.....	+34.28	9 22	33.73	
	$\epsilon$ Leonis.....	33.2	46.3	0.0	13.5	27.2	32	0.04	+ 0.92	.....	+34.30	9 32	35.26	
Feb. 26	Sun 1 Limb.....	.....	.....	12.4	25.8	39.2	34	12.32	+ 1.05	.....	+35.47	22 34	48.84	
	Sun 2 Limb.....	56.5	10.0	23.6	36.9	50.4	36	23.48	+ 1.05	.....	+35.47	22 37	0.00	
	$\alpha$ Ursæ Minoris.....	9.0	22.5	35.5	46.5	2.5	0	35.20	-11.74	.....	+35.69	.....	.....	
	$\alpha$ Canis Majoris.....	59.6	13.3	27.2	41.0	54.6	37	27.14	+ 1.11	+36.20	+36.20	6 38	4.45	
	$\theta$ Canis Majoris.....	40.0	53.4	6.7	20.2	33.7	46	6.80	+ 1.07	.....	+36.21	6 46	44.08	
	$\gamma$ Canis Majoris.....	24.9	38.7	52.5	6.1	20.0	55	52.44	+ 1.10	.....	+36.22	6 56	29.76	
	63 Aurigæ.....	24.7	42.2	59.6	16.8	34.0	59	59.46	+ 0.65	.....	+36.23	7 0	36.34	
	$\delta$ Geminorum.....	26.1	40.4	54.7	9.3	23.6	9	54.82	+ 0.81	36.18	+36.24	7 10	31.87	
	$\eta$ Canis Minoris.....	19.9	33.6	46.7	0.3	13.7	18	46.84	+ 0.93	.....	+36.26	7 19	24.03	
	$\alpha$ Geminorum preced.	11.9	.....	43.6	.....	15.0	23	43.50	+ 0.73	36.27	+36.27	7 24	20.50	
	$\alpha$ Geminorum follow.	.....	28.3	.....	59.8	.....	23	44.05	+ 0.73		+36.27	7 24	21.05	
	$\alpha$ Canis Minoris.....	49.8	3.2	16.6	29.8	43.2	30	16.52	+ 0.94	36.26	+36.28	7 30	53.74	
	26 Monocerotis.....	30.4	43.8	57.4	10.7	24.3	32	57.32	+ 0.95	.....	+36.28	7 33	34.55	
	$\beta$ Geminorum.....	21.8	37.0	52.1	7.2	22.4	34	52.10	+ 0.75	36.32	+36.28	7 35	29.13	



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.						
Feb. 26	A. S. C. 968.....	44.1	57.5	10.8	24.4	37.7	46	10.90	+ 0.90	.....	+ 36.30	h. m. s. 7 46 48.10
	13 Argûs.....	50.9	4.2	17.6	30.8	44.2	53	17.54	+ 0.95	.....	+ 36.31	7 53 54.80
	o Leonis.....	30.7	44.2	57.8	11.3	24.7	31	57.74	+ 0.90	.....	+ 36.45	9 32 35.09
	Moon 1 Limb.....	49.6	3.8	18.1	32.1	46.4	40	18.00	+ 0.89	.....	+ 36.46	9 40 55.35
Feb. 27	Sun 1 Limb.....	.....	.....	56.4	9.8	23.3	37	56.37	+ 1.04	.....	+ 37.61	22 38 35.02
	Sun 2 Limb.....	40.6	53.8	7.5	20.8	34.2	40	7.38	+ 1.04	.....	+ 37.61	22 40 46.03
	Venus 1 Limb.....	31.6	44.8	58.1	11.5	24.8	43	58.16	+ 1.00	.....	+ 37.70	23 44 36.86
	α Andromedæ.....	54.7	9.8	25.1	39.8	55.2	59	24.92	+ 0.75	+ 37.96	+ 37.73	0 0 3.40
	γ Pegasi.....	50.4	4.0	17.7	31.4	45.2	4	17.74	+ 0.86	37.78	+ 37.73	0 4 56.33
	α Ursæ Minoris.....	.....	17.5	31.0	45.0	58.0	0	31.25	- 11.38	.....	+ 37.81	1 0 57.68
	α Arietis.....	58.7	13.2	27.6	41.8	56.5	57	27.56	+ 0.79	37.92	+ 37.90	1 58 6.25
	μ Persei.....	47.7	7.7	27.6	47.6	7.5	2	27.62	+ 0.54	.....	+ 38.08	4 3 6.24
	A. S. C. 467.....	50.2	10.7	31.5	52.2	12.7	5	31.46	+ 0.52	.....	+ 38.09	4 6 10.07
	23 Orionis.....	17.4	30.8	44.4	57.6	11.0	13	44.24	+ 0.94	.....	+ 38.18	5 14 23.36
	ξ Leporis.....	2.7	16.4	29.8	43.8	57.5	15	30.04	+ 0.92	.....	+ 38.18	5 16 9.14
	ψ <sup>2</sup> Orionis.....	19.5	32.8	46.2	59.6	12.8	17	46.18	+ 0.94	.....	+ 38.18	5 18 25.30
	δ Orionis.....	42.4	55.5	8.7	22.0	35.4	23	8.80	+ 0.97	38.14	+ 38.19	5 23 47.96
	φ <sup>1</sup> Orionis.....	53.9	7.5	21.1	34.5	47.8	25	20.96	+ 0.90	.....	+ 38.19	5 26 0.05
	φ <sup>2</sup> Orionis.....	58.8	12.4	25.7	39.3	52.7	27	25.78	+ 0.90	.....	+ 38.20	5 28 4.88
	σ Orionis.....	35.1	48.6	1.8	15.1	28.5	30	1.82	+ 1.00	.....	+ 38.20	5 30 41.02
	ζ Orionis.....	33.5	46.7	59.9	13.3	26.5	31	59.98	+ 0.98	.....	+ 38.20	5 32 39.16
	ζ Leporis.....	34.0	47.7	1.5	15.3	29.1	39	1.52	+ 1.09	.....	+ 38.21	5 39 40.82
	55 Orionis.....	30.8	44.4	57.6	11.0	24.5	42	57.66	+ 1.03	.....	+ 38.22	5 43 36.91
	δ Aurigæ.....	54.2	16.7	39.5	2.3	24.7	45	39.48	+ 0.44	.....	+ 38.22	5 46 18.14
	θ Aurigæ.....	33.6	50.4	7.1	23.8	40.5	48	7.08	+ 0.67	.....	+ 38.22	5 48 45.97
	2 Monocerotis.....	20.6	34.3	47.6	1.1	14.5	50	47.62	+ 1.05	.....	+ 38.23	5 51 26.90
	μ Orionis.....	26.7	40.3	53.6	7.1	20.6	52	53.66	+ 0.89	.....	+ 38.23	5 53 32.78
	66 Orionis.....	23.4	36.7	50.1	3.4	16.7	55	50.06	+ 0.94	.....	+ 38.23	5 56 29.23
	Vesta.....	0.7	15.4	30.1	44.7	59.6	59	30.10	+ 0.78	.....	+ 38.24	6 0 9.12
	1 Lyncis.....	31.2	59.6	27.8	55.5	23.6	2	27.54	+ 0.29	.....	+ 38.24	6 3 6.07
	μ Geminorum.....	6.6	21.2	35.5	49.8	4.3	12	35.48	+ 0.79	38.25	+ 38.26	6 13 14.53
	δ Ursæ Min. S. P.....	.....	31.0	14.0	56.5	40.0	23	13.92	+ 6.40	.....	+ 38.28	6 23 58.60
	16 Monocerotis.....	40.5	54.3	7.7	21.2	34.7	37	7.68	+ 0.90	.....	+ 38.29	6 37 46.87
	Groombridge 1119....	1.5	28.5	56.0	27.0	56.5	42	57.90	- 19.19	.....	+ 38.30	6 43 17.01
	20 Monocerotis.....	9.5	22.6	35.8	49.3	2.6	1	35.96	+ 1.00	.....	+ 38.33	7 2 15.29
	ε Canis Minoris.....	46.2	59.5	13.2	26.6	40.2	16	13.14	+ 0.89	.....	+ 38.35	7 16 52.38
	η Canis Minoris.....	18.2	31.4	44.6	58.1	11.5	18	44.76	+ 0.92	.....	+ 38.35	7 19 24.03
	25 Monocerotis.....	11.8	25.3	38.6	51.7	5.3	28	38.54	+ 1.00	.....	+ 38.37	7 29 17.91
	4 Argûs.....	26.6	40.4	54.2	7.7	21.6	37	54.10	+ 1.08	.....	+ 38.38	7 38 33.56
	14 Canis Minoris.....	55.3	8.7	22.2	35.4	48.7	49	22.06	+ 0.94	.....	+ 38.40	7 50 1.40
	13 Argûs.....	49.0	2.4	15.6	28.8	42.3	53	15.62	+ 0.94	.....	+ 38.40	7 53 54.96
	Groombridge 1418....	1.5	55.0	48.0	41.5	35.0	7	48.20	- 3.42	.....	+ 38.42	8 8 23.20
	Groomb. 3402 S. P....	44.0	55.0	8.0	25.0	34.0	43	9.20	+ 14.59	.....	+ 38.47	8 44 2.26
	Groomb. 3548 S. P....	5.0	34.0	3.0	32.5	1.5	29	3.20	+ 6.05	.....	+ 38.53	9 29 47.78
	α Leonis.....	43.0	56.6	10.2	23.8	37.5	59	10.22	+ 0.88	38.38	+ 38.58	9 59 49.68
	Groombridge 1620....	.....	19.5	53.0	27.5	.....	4	53.33	- 2.95	.....	+ 38.59	10 5 28.97
	γ Leonis preceding....	59.5	.....	27.8	.....	56.2	10	27.83	+ 0.82	.....	+ 38.59	10 11 7.24
	γ Leonis following....	.....	13.8	.....	42.2	.....	10	28.00	+ 0.82	.....	+ 38.59	10 11 7.41
	Moon 1 Limb.....	22.2	36.1	50.0	3.7	17.5	27	49.90	+ 0.91	.....	+ 38.62	10 28 29.43
	53 Leonis.....	42.7	56.5	10.1	23.6	37.2	40	10.02	+ 0.88	.....	+ 38.63	10 40 49.53
	χ Leonis.....	38.3	51.6	5.1	18.3	31.8	56	5.02	+ 0.90	.....	+ 38.65	10 56 44.57
	Groomb. 4101 S. P....	26.0	58.5	28.5	5.0	37.0	26	31.00	+ 6.15	.....	+ 38.70	11 27 15.85
	Mars 1 Limb.....	52.1	.....	18.9	.....	45.8	49	18.93	+ 0.93	.....	+ 38.73	11 49 58.59
	Mars 2 Limb.....	.....	6.7	.....	33.4	.....	49	20.05	+ 0.93	.....	+ 38.73	11 49 59.71
Feb. 28	α Leonis.....	40.8	54.5	8.2	21.8	35.5	59	8.16	+ 0.88	+ 40.44	+ 40.57	9 59 49.61
	53 Leonis.....	40.6	54.2	7.7	21.4	34.8	40	7.74	+ 0.88	.....	+ 40.62	10 40 49.24

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Feb. 28	$\delta$ Leonis .....	24.4	38.6	52.8	.....	.....	4	52.86	+ 0.81	+40.76	+40.66	11 5	34.33	
	$\delta$ Hydræ & Crateris...	10.2	23.8	37.7	.....	.....	10	37.58	+ 1.08	40.76	+40.67	11 11	19.33	
	Moon 2 Limb.....	26.2	39.6	53.5	6.8	20.6	14	53.34	+ 0.95	.....	+40.68	11 15	34.97	
	$\nu$ Leonis .....	.....	.....	2.4	.....	29.2	28	2.52	+ 0.97	.....	+40.70	11 28	44.19	
	$\beta$ Leonis.....	43.6	57.2	11.0	24.8	38.6	40	11.04	+ 0.86	40.65	+40.72	11 40	52.62	
	$\beta$ Virginis.....	.....	.....	38.6	51.8	5.3	41	38.60	+ 0.94	.....	+40.73	11 42	20.27	
	Mars 1 Limb .....	.....	50.2	.....	16.8	.....	48	3.50	+ 0.93	.....	+40.74	11 48	45.17	
Mar. 1	Mars 2 Limb .....	38.0	.....	4.6	.....	31.2	48	4.60	+ 0.93	.....	+40.74	11 48	46.27	
	Sun 1 Limb.....	55.6	.....	.....	.....	49.4	45	22.50	+ 0.98	.....	+41.89	22 46	5.37	
	Sun 2 Limb.....	6.6	20.0	33.5	46.8	0.4	47	33.46	+ 0.98	.....	+41.89	22 48	16.33	
	$\alpha$ Tauri .....	30.7	44.7	58.6	12.5	26.5	25	58.60	+ 0.81	+42.49	+42.49	.....	.....	
	Mars 1 Limb .....	19.8	.....	46.4	.....	13.0	46	46.40	+ 0.88	.....	+42.57	11 47	29.85	
	Mars 2 Limb .....	.....	34.2	.....	0.8	.....	46	47.50	+ 0.88	.....	+42.57	11 47	30.95	
	A. S. C. 1390 .....	22.7	36.4	49.7	3.1	16.4	54	49.66	+ 0.87	+42.51	+42.57	11 55	33.10	
	Moon 2 Limb .....	56.8	10.3	23.8	37.6	51.1	58	23.92	+ 0.95	.....	+42.57	11 59	7.44	
	10 Virginis .....	18.2	31.4	44.6	57.8	11.2	0	44.64	+ 0.89	42.40	+42.57	12 1	28.10	
	$\eta$ Virginis.....	31.8	45.1	58.4	11.6	25.1	10	58.40	+ 0.92	42.71	+42.57	12 11	41.89	
	17 Virginis.....	12.4	25.6	39.1	52.5	5.8	13	39.08	+ 0.88	42.58	+42.57	12 14	22.53	
	A. S. C. 1434 .....	57.5	10.8	24.3	37.6	50.8	19	24.20	+ 0.88	42.71	+42.57	12 20	7.65	
Mar. 2	21 Virginis.....	19.4	33.1	46.5	59.8	13.2	24	46.40	+ 0.99	42.51	+42.57	12 25	29.96	
	Venus 1 Limb.....	.....	.....	27.5	40.8	54.1	57	27.47	+ 0.93	.....	+43.71	23 58	12.11	
	$\alpha$ Andromedæ .....	48.8	3.8	19.1	34.2	49.3	59	19.04	+ 0.71	+43.87	+43.71	0 0	3.46	
	$\alpha$ Ursæ Minoris .....	55.5	9.5	.....	35.0	49.0	0	22.30	- 10.67	.....	+43.81	1 0	55.44	
	$\delta$ Cassiopeæ .....	48.7	11.6	34.4	57.2	19.8	0	34.34	+ 0.42	.....	+43.81	1 1	18.57	
	$\alpha$ Arietis.....	52.8	7.2	21.5	35.7	50.1	57	21.46	+ 0.75	44.02	+43.90	1 58	6.11	
	$\alpha$ Tauri .....	29.4	43.2	56.8	10.5	24.5	25	56.88	+ 0.81	44.19	+44.14	4 26	41.83	
	$\alpha$ Orionis.....	16.4	29.8	43.4	56.7	10.3	45	43.32	+ 0.87	44.24	+44.25	5 46	28.44	
	66 Orionis.....	17.5	30.7	44.1	57.4	10.7	55	44.08	+ 0.89	.....	+44.27	5 56	29.24	
	Vesta.....	8.4	23.1	37.7	52.4	7.3	0	37.78	+ 0.74	.....	+44.27	6 1	22.79	
	2 Lyncis.....	50.8	16.6	42.5	8.5	34.3	4	42.54	+ 0.33	.....	+44.28	6 5	27.15	
	7 Monocerotis .....	46.7	0.0	13.4	27.0	40.5	11	13.52	+ 0.98	.....	+44.29	6 11	58.79	
	$\delta$ Ursæ Min. S. P. ....	43.0	25.5	8.0	52.0	34.5	23	8.60	+ 6.01	.....	+44.31	6 23	58.92	
	14 Monocerotis.....	52.7	6.0	19.4	32.8	46.4	25	19.46	+ 0.86	.....	+44.31	6 26	4.63	
	42 Camelopardi .....	16.7	52.1	27.1	2.0	37.4	33	27.06	+ 0.08	.....	+44.32	6 34	11.46	
	18 Monocerotis.....	17.5	30.7	44.1	57.5	10.7	38	44.10	+ 0.90	.....	+44.33	6 39	29.33	
	15 Lyncis.....	46.2	11.7	36.8	2.5	28.2	42	37.08	+ 0.34	.....	+44.33	6 43	21.75	
	$\gamma$ Canis Majoris .....	17.3	30.7	44.4	58.3	12.2	55	44.58	+ 1.03	.....	+44.35	6 56	29.96	
	20 Monocerotis.....	3.3	16.6	30.0	43.4	56.7	1	30.00	+ 0.95	.....	+44.36	7 2	15.31	
	22 Monocerotis.....	28.2	41.5	54.7	7.8	21.3	2	54.70	+ 0.92	.....	+44.36	7 3	39.98	
	$\delta$ Geminorum .....	18.0	32.4	46.6	1.1	15.5	9	46.72	+ 0.76	44.29	+44.37	7 10	31.85	
	$\eta$ Canis Minoris .....	11.9	25.3	38.7	52.2	5.5	18	38.72	+ 0.87	.....	+44.38	7 19	23.97	
	$\alpha$ Geminorum preced.	.....	19.8	.....	51.4	.....	23	35.60	+ 0.68	{ 44.20 }	+44.39	7 24	20.67	
	$\alpha$ Geminorum follow.	4.6	.....	36.3	.....	7.4	23	36.10	+ 0.68		+44.39	7 24	21.17	
	26 Monocerotis.....	22.4	36.0	49.5	2.9	16.5	32	49.46	+ 0.99	.....	+44.40	7 33	34.85	
	$\pi$ Canis Minoris .....	13.6	27.1	40.5	54.2	7.7	36	40.62	+ 0.84	.....	+44.41	7 37	25.87	
	Groombridge 1418 ...	54.0	47.5	40.0	35.0	27.5	7	40.80	- 3.21	.....	+44.45	8 8	22.04	
	Groomb. 3402 S. P. ....	46.0	53.5	3.0	17.0	31.0	43	6.10	+ 13.74	.....	+44.50	8 44	4.34	
	Groomb. 3548 S. P. ....	2.5	29.5	59.0	28.0	57.0	28	59.20	+ 5.69	.....	+44.57	9 29	49.46	
	Groombridge 1620 ...	38.5	12.5	47.0	22.0	56.0	4	47.20	- 2.77	.....	+44.62	10 5	29.05	
	Groomb. 4101 S. P. ....	19.0	52.0	24.0	58.0	32.0	26	25.00	+ 5.77	.....	+44.73	11 27	15.50	
	Mars 1 Limb .....	.....	13.8	.....	40.6	.....	45	27.20	+ 0.88	.....	+44.76	11 46	12.84	
	Mars 2 Limb .....	1.6	.....	28.2	.....	55.0	45	28.27	+ 0.88	.....	+44.76	11 46	13.91	
Mar. 4	Sun 1 Limb.....	2.2	15.7	29.2	42.6	56.0	56	29.14	+ 0.83	.....	+47.77	22 57	27.74	
	Sun 2 Limb.....	12.5	25.8	39.5	52.7	6.3	58	39.36	+ 0.83	.....	+47.77	22 59	27.96	
	$\alpha$ Andromedæ .....	44.8	0.0	15.2	30.3	45.4	59	15.14	+ 0.63	+47.85	+47.86	0 0	3.63	



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Mar. 4	Venus 1 Limb.....	58.7	11.8	25.3	38.7	52.1	6	25.32	+ 0.79	.....	+ 47.87	h. m. s. 0 7 13.98
	$\alpha$ Ursæ Minoris.....	51.0	.....	15.5	29.0	43.0	0	16.30	-- 7.83	.....	+ 47.94	.....
	$\alpha$ Arictis.....	48.7	3.2	17.6	31.8	46.4	57	17.54	+ 0.65	+ 48.02	+ 48.02	1 58 6.21
Mar. 5	$\alpha$ Geminorum preced.	58.3	.....	29.6	.....	1.1	23	29.67	+ 0.63	{ + 50.20 }	+ 50.32	7 24 20.62
	$\alpha$ Geminorum follow.	.....	14.4	.....	45.7	.....	23	30.05	+ 0.63		+ 50.32	7 24 21.00
	$\alpha$ Canis Minoris.....	35.7	49.0	2.4	15.7	29.1	30	2.38	+ 0.79	50.47	+ 50.33	7 30 53.50
	$\beta$ Geminorum .....	7.8	23.0	38.1	53.2	8.4	34	38.10	+ 0.65	50.34	+ 50.34	7 35 29.09
	4 Argûs.....	14.6	28.3	42.0	55.6	9.4	37	41.98	+ 0.91	.....	+ 50.34	7 38 33.23
	6 Argûs.....	7.1	21.0	35.0	48.8	2.6	41	34.90	+ 0.92	.....	+ 50.35	7 42 26.17
	9 Argûs.....	1.7	15.2	29.0	42.5	56.4	43	28.96	+ 0.91	.....	+ 50.35	7 44 20.22
	28 Monocerotis.....	45.5	58.7	12.1	25.3	38.6	52	12.04	+ 0.82	.....	+ 50.36	7 53 3.22
	$\epsilon$ Hydræ.....	58.5	11.7	25.3	38.7	52.0	37	25.24	+ 0.78	50.44	+ 50.42	8 38 16.44
	$\alpha$ Hydræ.....	24.2	37.5	50.8	4.3	17.6	18	50.88	+ 0.87	50.44	+ 50.49	9 19 42.24
	Groomb. 4101 S. P....	13.0	45.5	19.0	51.5	25.0	26	18.80	+ 4.55	.....	+ 50.68	11 27 14.03
	Mars 1 Limb .....	52.5	.....	19.4	.....	46.1	41	19.33	+ 0.78	.....	+ 50.71	11 42 10.82
	Mars 2 Limb .....	.....	6.6	.....	33.7	.....	41	20.15	+ 0.78	.....	+ 50.71	11 42 11.64
Mar. 6	Sun 1 Limb.....	24.0	37.4	50.8	4.2	17.4	3	50.76	+ 0.88	.....	+ 51.76	23 4 43.40
	Sun 2 Limb.....	33.8	47.3	0.5	14.0	27.6	6	0.64	+ 0.88	.....	+ 51.76	23 6 53.28
	Venus 1 Limb.....	55.8	9.1	.....	.....	.....	15	22.44	+ 0.84	.....	+ 51.87	0 16 15.15
	$\mu$ Aurigæ.....	59.4	16.1	33.2	50.0	7.1	1	33.16	+ 0.59	.....	+ 52.31	5 2 26.06
	$\beta$ Tauri.....	44.5	59.7	14.7	29.8	45.1	15	14.76	+ 0.67	+ 52.55	+ 52.33	5 16 7.76
	$\delta$ Orionis .....	27.7	41.3	54.6	7.8	21.1	22	54.50	+ 0.84	52.46	+ 52.34	5 23 47.68
	$\epsilon$ Orionis.....	44.0	57.2	10.6	23.8	37.1	27	10.54	+ 0.85	52.18	+ 52.35	5 28 3.74
	$\alpha$ Orionis .....	8.5	21.8	35.2	48.5	2.2	45	35.24	+ 0.80	52.33	+ 52.37	5 46 28.41
	$\alpha$ Canis Majoris .....	43.6	57.2	11.1	24.8	38.5	37	11.04	+ 0.94	52.34	+ 52.45	6 38 4.43
	Mars 1 Limb .....	.....	40.2	.....	7.3	.....	39	53.75	+ 0.80	.....	+ 52.88	11 40 47.43
	Mars 2 Limb .....	28.1	.....	54.8	.....	21.5	39	54.80	+ 0.80	.....	+ 52.88	11 40 48.48
Mar. 8	$\alpha$ Geminorum preced.	.....	7.4	.....	38.7	.....	23	23.05	+ 0.83	{ + 56.58 }	+ 56.66	7 24 20.54
	$\alpha$ Geminorum follow.	52.0	.....	23.6	.....	54.7	23	23.43	+ 0.83		+ 56.66	7 24 20.92
	$\alpha$ Canis Minoris.....	29.2	42.5	55.7	9.0	22.5	29	55.78	+ 1.08	56.75	+ 56.66	7 30 53.52
Mar. 9	Venus 1 Limb.....	20.4	33.6	47.0	0.3	13.6	28	46.98	+ 1.11	.....	+ 58.37	0 29 46.46
	$\alpha$ Ursæ Minoris .....	.....	55.0	.....	20.0	35.0	0	8.13	- 14.17	.....	+ 58.42	1 0 52.38
	$\alpha$ Arietis.....	37.7	52.3	6.6	20.8	35.4	57	6.56	+ 0.92	+ 58.68	+ 58.52	1 58 6.00
	$\alpha$ Aurigæ.....	11.4	30.5	49.5	8.7	27.7	3	49.56	+ 0.65	58.93	+ 58.83	5 4 49.04
	$\beta$ Orionis.....	21.7	35.2	48.6	2.1	15.5	5	48.62	+ 1.21	58.97	+ 58.83	5 6 48.66
	$\tau$ Orionis.....	21.3	34.7	48.0	1.5	14.7	8	48.04	+ 1.19	.....	+ 58.83	5 9 48.06
	$\lambda$ Leporis.....	42.7	56.3	10.1	23.5	37.2	11	9.96	+ 1.26	.....	+ 58.84	5 12 10.06
	Vesta.....	43.6	58.0	12.8	27.5	42.1	4	12.80	+ 0.90	.....	+ 58.93	6 5 12.63
	7 Monocerotis .....	31.7	45.1	58.4	11.8	25.3	10	58.46	+ 1.21	.....	+ 58.94	6 11 58.61
	A. S. C. 793 .....	24.2	37.5	50.7	4.1	17.3	13	50.76	+ 1.09	.....	+ 58.94	6 14 50.79
	77 Orionis.....	32.5	45.6	58.8	12.2	25.4	17	58.90	+ 1.13	.....	+ 58.95	6 18 58.98
	12 Monocerotis.....	21.3	34.4	47.7	1.0	14.5	22	47.78	+ 1.08	.....	+ 58.95	6 23 47.81
	$\delta$ Ursæ Min. S. P....	28.5	11.5	.....	.....	18.5	22	53.80	+ 7.90	.....	+ 58.95	6 24 0.65
	14 Monocerotis.....	37.7	51.0	4.5	17.8	31.2	25	4.44	+ 1.05	.....	+ 58.96	6 26 4.45
	$\alpha$ Canis Majoris .....	36.4	50.3	4.2	18.0	31.8	37	4.14	+ 1.28	58.85	+ 58.97	6 38 4.39
	20 Monocerotis.....	48.4	1.5	14.8	28.3	41.5	1	14.90	+ 1.17	.....	+ 59.01	7 2 15.08
	65 Aurigæ .....	45.6	2.2	18.8	35.4	52.2	10	18.84	+ 0.77	.....	+ 59.03	7 11 18.64
	1 Canis Minoris .....	35.5	49.2	3.0	16.5	30.0	15	2.84	+ 1.02	.....	+ 59.03	7 16 2.89
	7 Canis Minoris .....	58.3	11.5	25.1	38.7	52.1	18	25.14	+ 1.04	.....	+ 59.04	7 19 25.22
	$\delta^1$ Canis Minoris .....	18.8	32.1	45.5	58.8	12.2	22	45.48	+ 1.11	.....	+ 59.04	7 23 45.63
	$\delta^3$ Canis Minoris .....	23.8	37.0	50.4	3.7	16.8	24	50.34	+ 1.09	.....	+ 59.05	7 25 50.48
	$\delta$ Leonis .....	6.0	20.2	34.4	48.6	2.8	4	34.40	+ 0.94	59.16	+ 59.37	11 5 34.71
	Groomb. 4101 S. P....	2.0	34.5	8.0	41.0	14.0	26	7.90	+ 7.58	.....	+ 59.40	11 27 14.88
	Mars 1 Limb.....	3.2	.....	29.8	.....	56.6	35	29.87	+ 1.07	.....	+ 59.41	11 36 30.35

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Mar. 9	Mars 2 Limb .....	<i>s.</i> .....	<i>s.</i> 17.9	<i>s.</i> .....	<i>s.</i> 44.5	<i>s.</i> .....	<i>m.</i> 35	<i>s.</i> 31.20	<i>s.</i> + 1.07	<i>s.</i> .....	<i>s.</i> + 59.41	<i>h.</i> 11	<i>m.</i> 36	<i>s.</i> 31.68
Mar. 12	(a) Sun 1 Limb.....	18.4	31.8	45.1	58.4	11.8	26	45.10	+ 1.48	.....	+ 4.74	23	26	51.32
	Sun 2 Limb.....	27.7	41.2	54.5	7.9	21.2	28	54.50	+ 1.48	.....	+ 4.74	23	29	0.72
	$\alpha$ Aurigæ.....	4.7	23.8	43.0	2.0	20.8	4	42.86	+ 0.76	+ 5.45	+ 5.24	5	4	48.86
	$\beta$ Orionis.....	15.1	28.5	41.8	55.3	8.7	6	41.88	+ 1.54	5.33	+ 5.24	5	6	48.66
	$\beta$ Tauri.....	31.2	46.4	1.5	16.5	31.6	16	1.44	+ 1.07	5.36	+ 5.25	5	16	7.76
	1 Lyncis.....	4.4	31.8	0.0	28.1	56.0	3	0.06	+ 0.25	.....	+ 5.32	6	3	5.63
	Vesta.....	38.8	53.5	8.3	23.0	37.7	7	8.26	+ 1.11	.....	+ 5.33	6	7	14.70
	7 Monocerotis.....	25.0	38.4	51.7	5.2	18.5	11	51.76	+ 1.53	.....	+ 5.34	6	11	58.63
	A. S. C. 793.....	17.5	30.7	44.0	57.4	10.8	14	44.08	+ 1.38	.....	+ 5.34	6	14	50.80
	77 Orionis.....	25.6	38.8	52.2	5.4	18.7	18	52.14	+ 1.42	.....	+ 5.35	6	18	58.91
	$\delta$ Ursæ Min. S. P. ....	20.0	4.0	47.0	30.0	14.0	23	47.00	+ 11.38	.....	+ 5.36	.....	.....	.....
	$\nu^2$ Canis Majoris.....	5.7	19.7	33.8	48.0	2.0	29	33.84	+ 1.68	.....	+ 5.36	6	29	40.88
	42 Camelopardi.....	55.2	30.3	5.3	40.5	15.7	34	5.40	- 0.12	.....	+ 5.37	6	34	10.65
	16 Monocerotis.....	13.4	26.6	40.1	53.6	6.8	37	40.10	+ 1.32	.....	+ 5.38	6	37	46.80
	18 Monocerotis.....	55.8	9.1	22.4	35.6	49.1	39	22.40	+ 1.32	.....	+ 5.38	6	39	29.10
	$\theta$ Canis Majoris.....	9.7	23.2	36.8	50.4	4.0	46	36.82	+ 1.58	.....	+ 5.39	6	46	43.79
	$\iota$ Canis Majoris.....	23.8	37.8	51.6	5.5	19.5	48	51.64	+ 1.64	.....	+ 5.39	6	48	58.67
	19 Monocerotis.....	23.1	36.6	49.8	3.1	16.4	54	49.80	+ 1.48	.....	+ 5.40	6	54	56.68
	65 Aurigæ.....	38.8	55.7	12.5	28.7	45.7	11	12.28	+ 0.93	.....	+ 5.43	7	11	18.64
	1 Canis Minoris.....	29.1	42.6	56.2	9.7	23.4	15	56.20	+ 1.28	.....	+ 5.43	7	16	2.91
	$\delta^1$ Canis Minoris.....	12.0	25.5	38.8	52.1	5.4	23	38.76	+ 1.41	.....	+ 5.45	7	23	45.62
	$\delta^3$ Canis Minoris.....	16.7	30.2	43.5	57.0	10.4	25	43.56	+ 1.38	.....	+ 5.45	7	25	50.39
	Groombridge 1418.....	33.0	27.0	20.0	13.5	8.0	8	20.30	- 6.47	.....	+ 5.51	8	8	19.34
	6 Hydræ.....	51.4	4.7	18.3	32.0	45.6	32	18.40	+ 1.58	.....	+ 5.55	8	32	25.53
	14 Hydræ.....	44.4	57.5	11.0	24.1	37.5	41	10.90	+ 1.47	.....	+ 5.56	8	41	17.93
	Groomb. 3402 S. P. ....	15.0	31.0	41.0	.....	7.0	43	41.65	+ 26.33	.....	+ 5.56	8	44	13.54
	$\epsilon$ Leonis.....	8.8	23.2	37.6	52.2	6.7	36	37.70	+ 1.12	5.40	+ 5.64	9	36	44.46
	$\alpha$ Leonis.....	15.5	29.1	42.6	56.2	10.0	59	42.68	+ 1.27	5.53	+ 5.68	9	59	49.63
	Groombridge 1620.....	.....	53.5	28.5	2.0	37.0	5	28.08	- 5.62	.....	+ 5.69	10	5	28.15
	$\mu$ Ursæ Majoris.....	3.4	21.1	39.3	57.3	15.1	12	39.24	+ 0.83	.....	+ 5.70	10	12	45.77
	A. S. C. 1245.....	2.5	15.7	29.1	42.5	55.6	20	29.08	+ 1.47	.....	+ 5.71	10	20	36.26
	44 Leonis Minoris.....	27.5	42.7	58.0	12.6	28.2	40	57.80	+ 1.06	.....	+ 5.74	10	41	4.60
	67 Leonis.....	36.2	51.0	5.8	20.5	35.4	0	5.78	+ 1.10	.....	+ 5.77	11	0	12.65
Groomb. 4101 S. P. ....	54.0	26.5	0.5	32.5	7.0	27	0.10	+ 10.92	.....	+ 5.81	11	27	16.83	
Mars 1 Limb .....	.....	45.7	.....	12.6	.....	31	59.15	+ 1.34	.....	+ 5.82	11	32	6.31	
Mars 2 Limb .....	33.7	.....	0.3	.....	27.1	32	0.37	+ 1.34	.....	+ 5.82	11	32	7.53	
Mar. 13	Sun 1 Limb.....	56.4	9.8	23.2	36.5	49.8	30	23.14	+ 1.47	.....	+ 6.89	23	30	31.50
	Sun 2 Limb.....	5.3	18.8	32.4	45.8	59.0	32	32.26	+ 1.47	.....	+ 6.89	23	32	40.62
Mar. 15	INSTRUMENT REVERSED.													
Mar. 18	$\mu$ Geminorum.....	26.7	41.1	55.5	9.8	24.3	12	55.48	+ 0.54	+ 18.19	+ 18.29	6	13	14.31
	$\delta$ Ursæ Min. S. P. ....	12.5	55.5	.....	.....	.....	23	38.35	+ 8.53	.....	+ 18.31	6	24	5.19
	$\beta$ Geminorum.....	39.6	54.8	9.8	25.1	40.2	35	9.90	+ 0.49	18.51	+ 18.41	7	35	28.80
	9 Argûs.....	33.8	47.4	1.0	14.6	28.1	44	0.98	+ 0.75	.....	+ 18.43	7	44	20.16
	29 Monocerotis.....	45.6	59.0	12.2	25.5	39.0	0	12.26	+ 0.69	.....	+ 18.45	8	0	31.40
	Groombridge 1418....	18.0	12.0	5.5	59.0	52.0	8	5.30	- 5.16	.....	+ 18.46	8	8	18.60
	2 Hydræ.....	40.2	53.4	6.7	20.1	33.5	18	6.78	+ 0.70	.....	+ 18.47	8	18	25.95
	A. S. C. 1044 preced.	32.8	.....	59.7	.....	26.5	26	59.67	+ 0.63	.....	+ 18.49	8	27	18.79
	A. S. C. 1044 follow.	.....	46.4	.....	13.4	.....	26	59.90	+ 0.63	.....	+ 18.49	8	27	19.02
	$\delta$ Hydræ.....	23.4	36.7	50.2	3.6	17.0	28	50.18	+ 0.64	.....	+ 18.49	8	29	9.31
	6 Hydræ.....	38.8	52.5	6.0	19.6	33.2	32	6.02	+ 0.75	.....	+ 18.49	8	32	25.26
	$\iota$ Cancrî.....	9.1	24.2	39.4	54.8	10.2	36	39.54	+ 0.48	.....	+ 18.50	8	36	58.52
	14 Hydræ.....	31.7	45.1	58.4	11.7	25.2	40	58.42	+ 0.69	.....	+ 18.50	8	41	17.61
(a) Clock put forward one minute.														



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
Mar. 18	Groomb. 3402 S.P. ...	14.0	27.0	40.0	49.5	3.0	43 38.70	+ 19.98	.....	+ 18.51	h. m. s. 8 44 17.19
	A. S. C. 1103 .....	25.4	42.7	59.7	16.8	34.0	55 59.72	+ 0.39	.....	+ 18.52	8 56 18.63
	A. S. C. 1117 .....	39.2	53.5	7.8	22.1	36.4	4 7.80	+ 0.53	.....	+ 18.54	9 4 26.87
	40 Lynceis .....	25.0	41.1	57.3	13.4	29.6	10 57.28	+ 0.43	.....	+ 18.54	9 11 16.25
	$\alpha$ Hydræ .....	55.8	9.4	22.8	36.2	49.7	19 22.78	+ 0.72	+ 18.62	+ 18.55	9 19 42.05
	$\tau^1$ Hydræ .....	14.4	27.7	41.0	54.3	7.6	20 41.00	+ 0.70	.....	+ 18.56	9 21 0.26
	Groomb. 3548 S.P. ...	27.5	57.0	25.5	54.0	.....	29 25.45	+ 8.05	.....	+ 18.57	9 29 52.07
	$\epsilon$ Hydræ .....	53.6	7.1	20.4	33.5	46.8	31 20.28	+ 0.68	.....	+ 18.57	9 31 39.53
	$\epsilon$ Leonis .....	55.7	10.4	25.1	39.7	54.3	36 25.04	+ 0.52	18.62	+ 18.58	9 36 44.14
	22 Leonis .....	57.6	12.4	27.0	41.7	56.4	42 27.02	+ 0.51	.....	+ 18.59	9 42 46.12
	A. S. C. 1199 .....	0.3	13.6	27.1	40.7	54.4	54 27.22	+ 0.74	.....	+ 18.60	9 54 46.56
	$\nu^2$ Hydræ .....	32.4	45.7	59.3	13.0	26.5	56 59.38	+ 0.75	.....	+ 18.61	9 57 18.74
	$\alpha$ Leonis .....	3.1	16.6	30.4	44.0	57.4	59 30.30	+ 0.61	18.55	+ 18.61	9 59 49.52
	Groombridge 1620 ...	39.0	13.5	48.0	22.0	5 13.45	- 4.51	.....	.....	+ 18.62	10 5 27.56
	$\mu$ Hydræ .....	33.0	46.8	0.7	14.5	28.3	18 0.66	+ 0.77	.....	+ 18.63	10 18 20.06
	A. S. C. 1245 .....	50.3	3.6	16.8	30.1	43.5	20 16.86	+ 0.69	.....	+ 18.63	10 20 36.18
	$\phi^3$ Hydræ & Crateris..	59.3	12.9	26.8	40.5	54.4	30 26.78	+ 0.77	.....	+ 18.65	10 30 46.20
	3 Hydræ & Crateris..	13.7	27.4	41.4	55.3	9.3	38 41.42	+ 0.77	.....	+ 18.66	10 39 0.85
	$\nu$ Hydræ & Crateris..	56.0	9.7	23.4	37.1	51.1	41 23.46	+ 0.77	.....	+ 18.66	10 41 42.89
	6 Hydræ & Crateris..	51.4	5.5	19.5	33.6	47.7	45 19.54	+ 0.78	.....	+ 18.66	10 45 38.98
	$\lambda$ Hydræ & Crateris..	37.6	51.5	5.4	19.4	33.6	15 5.50	+ 0.78	.....	+ 18.70	11 15 24.98
	Mars 1 Limb .....	30.2	.....	56.7	.....	23.6	22 56.83	+ 0.64	.....	+ 18.71	11 23 16.18
	Mars 2 Limb .....	.....	44.5	.....	11.4	.....	22 57.95	+ 0.64	.....	+ 18.71	11 23 17.30
	Groomb. 4101 S.P. ...	46.0	.....	51.0	23.0	56.5	26 50.92	+ 8.17	.....	+ 18.72	11 27 17.81
	$\zeta$ Hydræ & Crateris..	51.0	5.1	18.8	32.6	46.5	36 18.80	+ 0.77	.....	+ 18.73	11 36 38.30
	93 Leonis .....	55.2	9.4	23.4	37.7	51.8	39 23.50	+ 0.54	.....	+ 18.73	11 39 42.77
	$\eta$ Hydræ & Crateris..	3.7	17.4	31.5	45.2	59.2	47 31.40	+ 0.77	.....	+ 18.74	11 47 50.91
	Groombridge 1850 ...	.....	11.5	48.0	24.5	59.0	56 47.65	- 6.66	.....	+ 18.76	11 56 59.75
	20 Virginis .....	.....	23.1	36.4	50.1	.....	24 36.53	+ 0.61	.....	+ 18.79	12 24 55.93
	.....	9.1	.....	.....	.....	3.4	36.25	+ 0.61	.....	.....	.....†
	A. S. C. 91 S.P. ....	38.0	24.5	10.0	55.5	41.0	47 9.80	+ 6.53	.....	+ 18.82	12 47 35.15
	$\alpha$ Ursæ Min. S. P. ....	.....	3.0	.....	27.0	42.0	0 15.53	+ 17.87	.....	+ 18.84	13 0 52.24
	Jupiter 1 Limb .....	2.9	.....	29.6	.....	56.2	0 29.57	+ 0.71	.....	+ 18.84	13 0 49.12
	Jupiter 2 Limb .....	.....	19.3	.....	45.9	.....	0 32.60	+ 0.71	.....	+ 18.84	13 0 52.15
	Pallas .....	11.7	25.3	38.7	52.3	5.6	20 38.72	+ 0.62	.....	+ 18.86	13 20 58.20
Mar. 19	Sun 1 Limb .....	40.2	53.7	6.8	20.2	33.6	52 6.90	+ 0.74	.....	+ 19.68	23 52 27.32
	Sun 2 Limb .....	49.1	2.5	15.8	29.2	42.4	54 15.80	+ 0.74	.....	+ 19.68	23 54 36.22
	$\alpha$ Andromedæ .....	13.4	28.5	43.6	58.6	13.7	59 43.56	+ 0.52	+ 19.58	+ 19.69	0 0 3.77
	Mercury 1 Limb .....	44.5	57.7	11.1	24.3	37.7	16 11.06	+ 0.72	.....	+ 19.71	0 16 31.49
	$\alpha$ Ursæ Minoris .....	23.5	37.0	50.0	4.0	15.5	0 50.00	- 17.66	.....	+ 19.77	1 0 52.11
	12 Canum Venat. ....	36.4	53.6	10.8	28.0	45.0	48 10.76	+ 0.40	20.77	+ 20.73	12 48 31.89
	$\alpha$ Ursæ Min. S. P. ....	46.5	59.0	.....	.....	.....	0 11.80	+ 19.40	.....	+ 20.74	13 0 51.94
Mar. 21	$\alpha$ Aurigæ .....	46.5	5.6	24.6	43.6	2.7	4 24.60	+ 0.26	+ 23.99	+ 24.11	5 4 48.97
	$\beta$ Orionis .....	56.8	10.4	23.7	37.2	50.6	6 23.74	+ 0.65	24.21	+ 24.11	5 6 48.50
	$\beta$ Tauri .....	12.9	28.1	43.2	58.3	13.5	15 43.20	+ 0.45	24.06	+ 24.12	5 16 7.77
	$\delta$ Orionis .....	56.3	9.5	22.7	35.9	49.3	23 22.74	+ 0.62	24.19	+ 24.13	5 23 47.49
	$\epsilon$ Orionis .....	12.0	25.2	38.6	51.8	5.2	27 38.56	+ 0.63	24.14	+ 24.14	5 28 3.33
	Moon 1 Limb .....	15.7	31.2	46.6	2.2	17.9	32 46.72	+ 0.47	.....	+ 24.14	5 33 11.33
	$\nu$ Aurigæ .....	22.2	39.3	56.4	13.6	30.8	39 56.46	+ 0.35	.....	+ 24.15	5 40 20.96
	136 Tauri .....	18.8	33.8	48.7	3.6	18.6	42 48.70	+ 0.46	.....	+ 24.16	5 43 13.32
	$\alpha$ Aurigæ .....	12.8	28.2	43.5	58.8	13.9	4 43.44	+ 0.44	.....	+ 24.19	6 5 8.07
	$\delta$ Ursæ Min. S. P. ....	8.0	51.0	34.5	17.0	0.0	23 34.10	+ 7.96	.....	+ 24.21	6 24 6.27
	Groombridge 1418 ...	10.5	4.0	57.0	51.0	44.0	7 57.30	- 4.83	.....	+ 24.34	8 8 16.81
	1 Hydræ .....	43.2	56.4	9.6	22.8	36.2	16 9.64	+ 0.63	.....	+ 24.35	8 16 34.62
	2 Hydræ .....	34.0	47.3	0.5	14.0	27.3	18 0.62	+ 0.64	.....	+ 24.35	8 18 25.61
	A. S. C. 1044 preced.	.....	40.3	.....	6.9	.....	26 53.60	+ 0.58	.....	+ 24.37	8 27 18.55

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Mar. 21	A. S. C. 1044 follow.	27.2	.....	53.8	.....	20.6	m.	s.	+ 0.58	.....	+ 24.37	h. m. s.
	δ Hydræ.....	17.4	30.7	44.1	57.6	10.8	28	44.12	+ 0.58	.....	+ 24.37	8 27 18.82
	6 Hydræ.....	32.8	46.4	59.8	13.5	27.2	31	59.94	+ 0.68	.....	+ 24.37	8 29 9.07
	14 Hydræ.....	25.8	39.2	52.5	5.7	19.1	40	52.46	+ 0.63	.....	+ 24.38	8 32 24.99
	Groomb. 3402 S. P. ...	10.5	26.0	39.0	48.5	1.0	43	37.00	+ 18.67	.....	+ 24.39	8 41 17.47
	A. S. C. 1103.....	19.4	36.2	53.2	10.8	27.6	55	53.44	+ 0.35	.....	+ 24.40	8 44 20.06
	A. S. C. 1117.....	33.1	47.5	1.8	16.1	30.5	4	1.80	+ 0.49	.....	+ 24.40	8 56 18.19
	40 Lyncis.....	18.5	34.8	51.1	7.5	23.6	10	51.10	+ 0.39	.....	+ 24.41	9 4 26.70
	τ <sup>1</sup> Hydræ.....	8.5	21.7	35.0	48.2	1.4	20	34.96	+ 0.64	.....	+ 24.42	9 11 15.91
	Groomb. 3548 S. P. ...	23.0	52.0	21.0	49.5	18.0	29	20.70	+ 7.52	.....	+ 24.43	9 21 0.03
	ι Hydræ.....	47.7	1.2	14.5	27.7	41.1	31	14.44	+ 0.62	.....	+ 24.44	9 29 52.66
	22 Leonis.....	51.6	6.3	20.8	35.7	50.4	42	20.96	+ 0.47	.....	+ 24.45	9 31 39.51
	ν <sup>2</sup> Hydræ.....	26.4	39.9	53.4	7.2	20.6	56	53.50	+ 0.68	.....	+ 24.46	9 42 45.89
	Groombridge 1620 ...	57.0	32.0	7.0	41.0	15.0	5	6.40	- 4.22	.....	+ 24.48	9 57 18.66
	μ Hydræ.....	27.4	41.0	54.8	8.6	22.4	17	54.84	+ 0.70	.....	+ 24.49	10 5 26.67
	φ <sup>3</sup> Hydræ & Crateris	53.3	7.1	20.8	34.6	48.3	30	20.82	+ 0.70	.....	+ 24.50	10 18 20.04
	3 Hydræ & Crateris...	7.8	21.6	35.3	49.3	3.3	38	35.46	+ 0.70	.....	+ 24.52	10 30 46.04
	ν Hydræ & Crateris...	50.0	3.7	17.5	31.2	45.1	30	20.82	+ 0.70	.....	+ 24.53	10 39 0.69
	λ Hydræ & Crateris...	31.6	45.7	59.7	13.5	27.7	41	17.50	+ 0.71	.....	+ 24.54	10 41 42.74
	Mars 1 Limb.....	.....	20.6	.....	47.4	.....	14	59.64	+ 0.71	.....	+ 24.58	11 15 24.93
	Mars 2 Limb.....	8.3	.....	35.1	.....	1.8	18	34.00	+ 0.58	.....	+ 24.58	11 18 59.16
	86 Leonis.....	13.5	27.5	41.6	55.6	9.7	21	35.07	+ 0.58	.....	+ 24.58	11 19 0.23
	ι Hydræ & Crateris...	40.7	54.1	7.6	21.1	34.5	18	41.58	+ 0.51	.....	+ 24.59	11 22 6.68
	24 Hydræ & Crateris...	39.1	52.6	6.2	19.8	33.4	28	7.60	+ 0.66	.....	+ 24.59	11 28 32.86
	93 Leonis.....	48.9	.....	.....	.....	45.8	30	6.22	+ 0.68	.....	+ 24.60	11 28 32.86
	.....	.....	3.0	17.1	31.4	.....	30	6.22	+ 0.68	.....	+ 24.60	11 30 31.50
	η Hydræ & Crateris...	57.7	11.7	25.6	39.4	53.3	39	17.35	+ 0.49	.....	+ 24.61	11 39 42.45
	Groombridge 1850 ...	27.0	4.5	41.0	17.5	54.0	47	17.17	+ 0.49	.....	.....	.....
	Groombridge 1884 ...	33.5	35.5	35.5	33.5	35.0	47	25.54	+ 0.70	.....	+ 24.62	11 47 50.86
	Groomb. 144 S. P. ...	8.0	2.0	55.5	48.0	43.5	40	40.80	- 6.23	.....	+ 24.64	11 56 59.21
	A. S. C. 91 S. P. ....	33.0	19.0	4.5	50.0	35.0	15	34.60	- 16.75	.....	+ 24.66	12 15 42.51
	Jupiter 1 Limb.....	.....	51.9	.....	18.6	.....	40	55.40	+ 14.11	.....	+ 24.69	12 41 34.20
	Jupiter 2 Limb.....	41.6	.....	8.4	.....	35.1	47	4.30	+ 6.09	.....	+ 24.70	12 47 35.09
	α Ursæ Min. S. P. ....	43.5	57.0	12.0	22.5	35.0	59	5.25	+ 0.64	.....	+ 24.71	12 59 30.60
	Pallas.....	18.0	31.4	45.0	58.5	12.2	59	8.37	+ 0.64	.....	+ 24.71	12 59 33.72
	Groombridge 2007 ...	44.0	.....	30.0	23.0	15.5	0	10.00	+ 16.70	.....	+ 24.71	13 0 51.41
	Ceres.....	28.5	41.8	55.2	8.6	22.1	18	45.02	+ 0.55	.....	+ 24.73	13 19 10.30
	.....	.....	.....	.....	.....	.....	21	29.92	- 4.82	.....	+ 24.74	13 21 49.84
	.....	.....	.....	.....	.....	.....	35	55.24	+ 0.58	.....	+ 24.76	13 36 20.58
Mar. 22	Sun 1 Limb.....	29.6	43.0	56.2	9.6	22.9	2	56.26	+ 0.74	.....	+ 25.56	0 3 22.56
	Sun 2 Limb.....	38.8	51.8	5.1	18.2	31.5	5	5.08	+ 0.74	.....	+ 25.56	0 5 31.38
	α Ursæ Minoris.....	18.5	31.5	43.0	56.0	10.0	0	43.80	- 18.39	.....	+ 25.63	1 0 51.04
	Venus 1 Limb.....	46.3	59.8	.....	.....	40.4	28	13.33	+ 0.68	.....	+ 25.66	1 28 39.67
	α Arietis.....	11.2	25.5	39.8	54.2	8.6	57	39.86	+ 0.57	+ 25.63	+ 25.69	1 58 6.12
	η Tauri.....	0.2	14.7	29.3	43.6	58.0	37	29.16	+ 0.56	25.69	+ 25.83	3 37 55.55
	α Orionis.....	34.7	48.1	1.5	14.8	28.3	46	1.48	+ 0.68	25.94	+ 25.99	5 46 28.15
	α Aurigæ.....	11.0	26.4	41.5	56.7	12.1	4	41.54	+ 0.51	.....	+ 26.02	6 5 8.07
	μ Geminorum.....	18.4	33.0	47.5	2.0	16.5	12	47.48	+ 0.57	26.09	+ 26.03	6 13 14.08
	δ Ursæ Min. S. P. ....	6.5	49.0	32.0	14.5	57.5	23	31.90	+ 9.59	.....	+ 26.04	6 24 7.53
	Moon 1 Limb.....	49.4	4.8	20.4	36.0	51.4	36	20.40	+ 0.55	.....	+ 26.06	6 36 47.01
	18 Monocerotis.....	35.5	48.7	2.2	15.5	28.7	39	2.12	+ 0.73	.....	+ 26.06	6 39 28.91
	ι Canis Majoris.....	3.6	17.5	31.4	45.3	59.2	48	31.40	+ 0.85	.....	+ 26.07	6 48 58.32
	22 Monocerotis.....	46.2	59.4	12.6	25.9	39.3	3	12.68	+ 0.74	.....	+ 26.09	7 3 39.51
	δ Geminorum.....	36.0	50.4	4.7	19.1	33.5	10	4.74	+ 0.57	26.18	+ 26.10	7 10 31.41
	1 Canis Minoris.....	8.7	22.1	35.7	49.3	2.8	15	35.72	+ 0.65	.....	+ 26.11	7 16 2.48
	γ Canis Minoris.....	31.1	44.5	57.8	11.4	24.8	18	57.92	+ 0.68	.....	+ 26.11	7 19 24.71
	α Geminorum preced.	21.9	.....	53.5	.....	25.0	23	53.47	+ 0.47	{ 26.22 }	+ 26.12	7 24 20.06
	α Geminorum follow.	.....	38.3	.....	9.7	.....	23	54.00	+ 0.47		+ 26.12	7 24 20.59
	ι Cancri.....	1.3	16.5	31.7	46.8	2.2	36	31.70	+ 0.51		+ 26.21	8 36 58.42



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Mar. 22	$\epsilon$ Hydræ .....	2.1	15.5	28.8	42.2	55.6	39	28.84	+ 0.69	.....	+26.21	8 39 55.74
Mar. 23	Mercury 1 Limb.....	2.5	15.8	29.2	42.6	55.8	44	29.18	+ 0.68	.....	+27.44	0 44 57.30
	$\alpha$ Ursæ Minoris .....	.....	29.0	42.0	54.0	7.5	0	41.85	- 17.68	.....	+27.46	1 0 51.63
	Venus 1 Limb.....	19.0	32.4	45.9	59.5	12.9	32	45.94	+ 0.65	.....	+27.51	1 33 14.10
	$\eta$ Tauri.....	58.3	12.7	27.3	41.7	56.3	37	27.26	+ 0.54	+27.60	+27.66	3 37 55.46
	$\beta$ Tauri.....	9.5	24.6	39.5	54.6	9.7	15	39.58	+ 0.50	27.59	+27.79	5 16 7.87
	$\delta$ Orionis .....	52.5	5.8	19.0	32.3	45.7	23	19.06	+ 0.71	27.74	+27.80	5 23 47.57
	$\epsilon$ Orionis .....	8.2	21.5	34.8	48.1	1.4	27	34.80	+ 0.72	27.77	+27.81	5 28 3.33
	$\delta$ Ursæ Min. S. P. ....	6.0	48.5	.....	.....	.....	23	31.60	+ 0.23	.....	+27.87	6 24 8.70
	$\delta$ Geminorum .....	33.8	48.4	2.7	16.8	31.2	10	2.58	+ 0.55	28.32	+27.92	7 10 31.05
	$\epsilon$ Canis Minoris.....	56.3	9.8	23.2	36.7	50.2	16	23.24	+ 0.65	.....	+27.93	7 16 51.82
	$\gamma$ Canis Minoris.....	29.3	42.6	56.2	9.5	23.0	18	56.12	+ 0.65	.....	+27.93	7 19 24.70
	$\alpha$ Geminorum follow.	20.7	.....	52.2	.....	.....	23	52.16	+ 0.45	.....	+27.94	7 24 20.55
	Moon 1 Limb .....	14.2	29.5	44.7	0.0	15.2	36	44.72	+ 0.54	.....	+27.95	7 37 13.21
	6 Argûs.....	29.0	43.1	57.1	11.0	24.7	41	56.98	+ 0.81	.....	+27.96	7 42 25.75
	9 Argûs.....	23.7	37.5	51.3	4.8	18.4	43	51.14	+ 0.79	.....	+27.96	7 44 19.89
	A. S. C. 968.....	52.1	5.6	19.1	32.5	46.0	46	19.06	+ 0.65	.....	+27.96	7 46 47.67
	6 Cancrî .....	40.2	55.3	10.4	25.3	40.5	53	10.34	+ 0.50	.....	+27.97	7 53 38.81
	29 Monocerotis.....	35.9	49.2	2.5	15.7	29.2	0	2.50	+ 0.72	.....	+27.98	8 0 31.20
	$\beta$ Cancrî .....	52.5	6.1	19.5	32.8	46.3	7	19.44	+ 0.64	.....	+27.99	8 7 48.07
	1 Hydræ.....	39.2	52.4	5.8	19.2	32.5	16	5.82	+ 0.73	.....	+28.00	8 16 34.55
	2 Hydræ .....	30.4	43.6	56.8	10.2	23.5	17	56.90	+ 0.73	.....	+28.00	8 18 25.63
	$\theta$ Cancrî .....	29.4	43.4	57.4	11.4	25.4	21	57.40	+ 0.58	.....	+28.00	8 22 25.98
	$\delta$ Hydræ.....	13.6	27.0	40.4	53.6	7.1	28	40.34	+ 0.67	.....	+28.01	8 29 9.02
	$\epsilon^2$ Cancrî .....	2.6	17.6	32.8	48.1	3.4	42	32.90	+ 0.49	.....	+28.02	8 43 1.41
	$\zeta$ Hydræ.....	58.7	12.0	25.4	38.8	52.3	46	25.44	+ 0.66	.....	+28.03	8 46 54.13
	A. S. C. 1103 .....	15.5	32.6	49.8	6.8	24.0	55	49.74	+ 0.38	.....	+28.04	8 56 18.16
	A. S. C. 1117 .....	29.4	43.8	58.1	12.4	26.7	3	58.08	+ 0.55	.....	+28.04	9 4 26.67
	23 Hydræ.....	48.0	1.3	14.6	28.0	41.5	8	14.68	+ 0.75	.....	+28.05	9 8 43.48
	$\tau^1$ Hydræ.....	4.7	17.9	31.1	44.4	57.8	20	31.18	+ 0.73	.....	+28.06	9 20 59.97
	Groomb. 3548 S. P. ....	20.0	49.0	18.0	46.5	16.0	29	17.90	+ 8.71	.....	+28.07	9 29 54.68
	A. S. C. 1245 .....	40.5	54.1	7.2	20.6	33.8	20	7.24	+ 0.72	.....	+28.13	10 20 36.09
	$\rho^3$ Hydræ & Crateris...	49.5	3.3	17.2	31.2	44.8	30	17.20	+ 0.81	.....	+28.15	10 30 46.16
	33 Sextantis.....	.....	32.4	45.6	59.0	.....	32	45.67	+ 0.72	.....	+28.15	10 33 14.54
	.....	18.7	.....	.....	.....	12.0	.....	45.35	+ 0.72	.....	.....	.....†
	Mars 1 Limb .....	18.0	.....	45.0	.....	11.9	15	44.97	+ 0.65	.....	+28.20	11 16 13.82
	Mars 2 Limb .....	.....	32.5	.....	59.5	.....	15	46.00	+ 0.65	.....	+28.20	11 16 14.85
	86 Leonis.....	9.7	23.8	37.9	52.0	6.2	21	37.92	+ 0.58	.....	+28.20	11 22 6.70
	$\theta$ Hydræ & Crateris...	37.1	50.4	3.8	17.4	30.7	28	3.88	+ 0.60	.....	+28.21	11 28 32.69
	$\eta$ Hydræ & Crateris...	54.4	8.2	21.8	35.6	49.5	47	21.90	+ 0.82	.....	+28.24	11 47 50.96
Mar. 24	$\alpha$ Canis Minoris .....	56.5	9.7	23.2	36.4	49.7	30	23.10	+ 0.64	+29.65	+29.58	7 30 53.32
	6 Cancrî .....	38.5	53.6	8.8	23.7	39.9	53	8.90	+ 0.48	.....	+29.61	7 53 38.99
	Moon 1 Limb .....	24.1	38.7	53.5	8.2	23.1	32	53.52	+ 0.53	.....	+29.65	8 33 23.70
	$\epsilon^4$ Cancrî .....	1.5	16.7	32.0	47.1	2.2	45	31.90	+ 0.48	.....	+29.67	8 46 2.05
	$\xi$ Cancrî .....	8.2	22.7	37.2	51.6	6.1	59	37.16	+ 0.53	.....	+29.69	9 0 7.38
	$\pi^2$ Cancrî .....	23.7	37.7	51.5	5.4	19.2	5	51.50	+ 0.58	.....	+29.70	9 6 21.78
	83 Cancrî .....	2.8	16.8	30.7	44.7	58.8	9	30.76	+ 0.56	.....	+29.70	9 10 1.02
	A. S. C. 1141 .....	44.4	58.5	12.7	26.8	40.9	15	12.66	+ 0.54	.....	+29.71	9 15 42.91
	$\alpha$ Hydræ.....	44.7	58.2	11.6	25.2	38.8	19	11.70	+ 0.73	29.64	+29.71	9 19 42.14
Mar. 25	Sun 1 Limb.....	18.7	31.9	45.2	58.6	11.8	13	45.24	+ 0.64	.....	+30.84	0 14 16.72
	Sun 2 Limb.....	27.3	40.6	54.1	7.5	20.9	15	54.08	+ 0.64	.....	+30.84	0 16 25.56
	$\alpha$ Ursæ Minoris .....	11.0	24.0	36.5	49.0	3.0	0	36.70	- 16.63	.....	+30.89	1 0 50.96
	Venus 1 Limb.....	26.2	39.8	53.3	6.7	20.5	41	53.30	+ 0.59	.....	+30.94	1 42 24.83
	$\alpha$ Arietis.....	5.8	20.4	34.8	49.2	3.5	57	34.74	+ 0.50	+30.81	+30.97	1 58 6.21
	$\alpha$ Orionis .....	29.4	42.7	56.2	9.5	23.0	45	56.16	+ 0.61	31.28	+31.25	5 46 28.02

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Mar. 25	$\mu$ Geminorum .....	13.6	27.9	42.2	56.7	11.2	12	42.32	+ 0.50	+ 31.27	+ 31.29	6 13	14.11	
	$\delta$ Ursæ Min. S. P. ....	44.0	28.0	11.0	53.5	23	27.68	+ 8.66	.....	+ 31.30	+ 31.30	6 24	7.64	
	$\alpha$ Canis Majoris .....	4.3	18.1	31.8	45.7	59.6	37	31.90	+ 0.75	31.34	+ 31.32	6 38	3.97	
	29 Monocerotis .....	32.2	45.6	58.8	12.3	25.5	59	58.88	+ 0.67	.....	+ 31.42	8 0	30.97	
	$\beta$ Cancri .....	48.8	2.4	15.8	29.5	42.8	7	15.86	+ 0.59	.....	+ 31.43	8 7	47.88	
	22 Argûs .....	14.2	28.0	41.6	55.3	8.8	14	41.58	+ 0.73	.....	+ 31.44	8 15	13.75	
	A. S. C. 1041 .....	17.5	31.7	45.9	59.8	14.0	23	45.78	+ 0.76	.....	+ 31.45	8 24	17.99	
	9 Hydræ .....	16.5	30.4	44.1	57.7	11.7	33	44.08	+ 0.74	.....	+ 31.46	8 34	16.28	
	$\epsilon$ Hydræ .....	17.2	30.6	44.1	57.5	10.8	37	44.04	+ 0.61	31.62	+ 31.47	8 38	16.12	
	$\zeta$ Hydræ .....	55.4	.....	.....	.....	48.7	46	22.05	+ 0.61	.....	+ 31.48	8 46	54.14	
	.....	.....	8.4	21.8	35.1	.....	.....	21.77	+ 0.61	.....	.....	.....	.....	†
	A. S. C. 1099 .....	27.4	47.2	7.0	26.7	46.5	52	6.96	+ 0.22	.....	+ 31.49	8 52	38.67	
	$\omega$ Hydræ .....	32.4	45.5	58.8	12.2	25.6	56	58.90	+ 0.62	.....	+ 31.50	8 57	31.02	
	$\xi$ Cancri .....	6.4	21.0	35.4	49.7	4.2	59	35.34	+ 0.50	.....	+ 31.50	9 0	7.34	
	83 Cancri .....	0.8	15.2	29.0	42.5	57.1	9	28.92	+ 0.53	.....	+ 31.51	9 10	0.96	
	Moon 1 Limb .....	12.3	26.5	40.8	55.1	9.6	24	40.86	+ 0.54	.....	+ 31.53	9 25	12.93	
	$\iota$ Hydræ .....	40.5	54.2	7.4	20.7	34.0	31	7.36	+ 0.65	.....	+ 31.54	9 31	39.55	
	22 Leonis .....	44.6	59.4	14.1	28.6	43.4	42	14.02	+ 0.48	.....	+ 31.56	9 42	46.06	
	$\nu$ Leonis .....	35.7	49.4	3.2	16.7	30.3	49	3.06	+ 0.56	.....	+ 31.57	9 49	35.19	
	$\eta$ Leonis .....	34.6	48.6	2.5	16.5	30.4	58	2.52	+ 0.53	.....	+ 31.58	9 58	34.63	
	$\lambda^2$ Hydræ .....	46.6	0.1	13.8	27.3	40.6	2	13.68	+ 0.73	.....	+ 31.58	10 2	45.99	
	$\mu$ Hydræ .....	20.0	33.5	47.4	1.4	15.2	17	47.50	+ 0.74	.....	+ 31.60	10 18	19.84	
	1 Hydræ & Crateris...	26.7	40.6	54.4	8.2	22.1	27	54.40	+ 0.74	.....	+ 31.61	10 28	26.75	
	3 Hydræ & Crateris...	0.6	14.5	28.3	42.0	56.2	38	28.32	+ 0.75	.....	+ 31.62	10 39	0.69	
	6 Hydræ & Crateris...	38.5	52.5	6.5	20.5	34.6	45	6.52	+ 0.76	.....	+ 31.63	10 45	38.91	
	$\alpha$ Hydræ & Crateris...	57.5	11.4	25.5	39.4	53.3	51	25.42	+ 0.75	.....	+ 31.64	10 51	57.81	
	Mars 1 Limb .....	48.9	.....	.....	15.5	.....	13	2.20	+ 0.60	.....	+ 31.66	11 13	34.46	
	Mars 2 Limb .....	36.6	.....	3.4	.....	30.2	13	3.40	+ 0.60	.....	+ 31.66	11 13	35.66	
	$\lambda$ Hydræ & Crateris...	24.4	38.7	52.6	6.5	20.5	14	52.54	+ 0.75	.....	+ 31.67	11 15	24.96	
	$\theta$ Hydræ & Crateris...	33.6	47.2	0.4	14.0	27.4	28	0.52	+ 0.71	.....	+ 31.68	11 28	32.91	
	$\zeta$ Hydræ & Crateris...	38.1	52.0	5.8	19.8	33.7	36	5.88	+ 0.75	.....	+ 31.69	11 36	38.32	
	Groombridge 1850 ...	22.0	59.5	34.0	11.0	46.0	56	34.50	- 6.85	.....	+ 31.72	11 56	59.37	
	Groombridge 1884 ...	26.5	26.0	26.0	25.5	30.0	15	26.80	- 18.35	.....	+ 31.74	12 15	40.19	
	Groomb. 144 S. P. ...	0.5	55.0	47.0	41.0	33.5	40	47.40	+ 15.39	.....	+ 31.77	12 41	34.56	
	A. S. C. 91 S. P. ....	25.5	11.0	57.0	41.5	26.5	46	56.30	+ 6.62	.....	+ 31.78	12 47	34.70	
	Jupiter 1 Limb .....	.....	56.7	.....	23.4	.....	57	10.05	+ 0.68	.....	+ 31.80	12 57	42.53	
	Jupiter 2 Limb .....	46.3	.....	13.1	.....	39.6	57	13.00	+ 0.68	.....	+ 31.80	12 57	45.48	
	$\alpha$ Ursæ Min. S. P. ....	37.5	48.5	0.0	13.5	.....	0	1.15	+ 18.21	.....	+ 31.80	13 0	51.16	
	Pallas .....	33.8	47.4	1.2	14.5	28.1	16	1.00	+ 0.57	.....	+ 31.82	13 16	33.39	
	Groombridge 2007 ...	.....	30.0	23.5	16.5	9.0	21	23.32	- 5.31	.....	+ 31.83	13 21	49.84	
	Ceres .....	30.1	43.4	56.7	10.2	23.6	32	56.80	+ 0.61	.....	+ 31.84	13 33	29.25	
Mar. 26	Sun 1 Limb .....	54.8	8.1	21.4	34.6	48.0	17	21.38	+ 0.64	.....	+ 32.68	0 17	54.70	
	Sun 2 Limb .....	3.5	16.8	30.0	43.3	56.5	19	30.02	+ 0.64	.....	+ 32.68	0 20	3.34	
Mar. 27	$\alpha$ Ursæ Minoris .....	8.0	24.0	.....	47.0	59.0	0	34.48	- 18.04	.....	+ 34.58	1 0	51.02	
	Venus 1 Limb .....	35.7	49.4	3.1	16.6	30.2	51	3.00	+ 0.64	.....	+ 34.65	1 51	38.29	
	$\alpha$ Orionis .....	25.8	39.4	52.5	5.8	19.3	45	52.56	+ 0.66	+ 34.80	+ 34.95	5 46	28.17	
	A. S. C. 761 .....	17.4	54.9	32.8	10.6	48.0	0	32.74	- 0.51	.....	+ 34.97	6 1	7.20	
	2 Lynceis .....	59.3	25.4	54.0	16.7	42.6	4	51.00	- 0.03	.....	+ 34.98	6 5	25.95	
	$\mu$ Geminorum .....	9.7	24.3	38.6	52.8	7.3	12	38.54	+ 0.56	34.96	+ 34.99	6 13	14.09	
	$\delta$ Ursæ Min. S. P. ....	59.0	42.0	25.5	8.0	51.0	23	25.10	+ 9.40	.....	+ 35.00	6 24	9.50	
	A. S. C. 1041 .....	14.0	28.0	42.1	56.2	10.3	23	42.12	+ 0.84	.....	+ 35.15	8 24	18.11	
	A. S. C. 1044 preced.	16.0	.....	42.6	.....	9.4	26	42.67	+ 0.67	.....	+ 35.16	8 27	18.50	
	A. S. C. 1044 follow.	.....	29.6	.....	56.4	.....	26	43.00	+ 0.67	.....	+ 35.16	8 27	18.83	
	$\sigma$ Hydræ .....	19.3	32.5	45.8	59.1	12.5	29	45.84	+ 0.69	.....	+ 35.16	8 30	21.69	
	$\epsilon$ Hydræ .....	13.4	26.8	40.3	53.6	7.2	37	40.26	+ 0.67	35.31	+ 35.17	8 38	16.10	
	$\zeta$ Hydræ .....	52.8	6.4	19.7	33.0	46.4	39	19.66	+ 0.67	.....	+ 35.17	8 39	55.50	



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
Mar. 27	$\epsilon^2$ Cancri .....	55.4	10.6	25.8	41.1	56.3	42	25.84	+ 0.50	.....	+35.18	<i>h. m. s.</i> 8 43 1.52
	A. S. C. 1099 .....	23.5	43.3	3.4	.....	42.5	52	3.12	+ 0.25	.....	+35.19	8 52 38.56
	A. S. C. 91 S. P. ....	22.0	7.0	52.5	37.5	23.0	46	52.40	+ 7.18	.....	+35.48	12 47 35.06
	Jupiter 1 Limb .....	44.4	.....	11.0	.....	37.7	56	11.03	+ 0.75	.....	+35.50	12 56 47.28
	Jupiter 2 Limb .....	.....	0.7	.....	27.5	.....	56	14.10	+ 0.75	.....	+35.50	12 56 50.35
	$\alpha$ Ursæ Min. S. P. ....	31.0	43.0	56.0	9.0	.....	59	55.98	+19.76	.....	+35.50	13 0 51.24
	Pallas .....	7.3	20.8	34.4	48.2	1.8	14	34.50	+ 0.63	.....	+35.52	13 15 10.65
	$\alpha$ Virginis .....	41.8	55.3	8.6	22.3	35.5	16	8.70	+ 0.78	+35.59	+35.52	13 16 45.00
Mar. 29	Sun 1 Limb .....	43.0	56.3	9.5	23.0	36.2	28	9.60	+ 0.58	.....	+38.21	0 28 48.39
	1 Lyncis .....	31.0	58.8	26.7	54.5	22.4	2	26.68	- 0.27	.....	+38.63	6 3 5.04
	2 Lyncis .....	55.6	21.7	47.5	13.4	39.3	4	47.50	- 0.18	.....	+38.64	6 5 25.96
	$\mu$ Geminorum .....	6.2	20.5	35.0	49.4	3.8	12	34.98	+ 0.43	+38.61	+38.65	6 13 14.06
	$\delta$ Ursæ Min. S. P. ....	56.0	38.5	21.0	4.0	47.0	23	21.30	+ 9.63	.....	+38.66	6 24 9.59
	42 Camelopardi .....	21.4	56.8	31.8	6.8	42.0	33	31.76	- 0.57	.....	+38.67	6 34 9.86
	$\alpha$ Canis Minoris .....	47.4	0.8	14.1	27.5	40.8	30	14.12	+ 0.57	38.62	+38.75	7 30 53.44
	$\beta$ Geminorum .....	19.5	34.5	49.7	4.8	19.8	34	49.66	+ 0.38	38.67	+38.75	7 35 28.79
	A. S. C. 1041 .....	10.4	24.4	38.4	52.5	6.5	23	38.44	+ 0.73	.....	+38.81	8 24 17.98
	A. S. C. 1044 preced. ....	.....	25.7	.....	52.5	.....	26	39.10	+ 0.56	.....	+38.81	8 27 18.47
	A. S. C. 1044 follow. ....	12.5	.....	39.4	.....	6.4	26	39.43	+ 0.56	.....	+38.81	8 27 18.80
	$\sigma$ Hydræ .....	15.5	29.0	42.4	55.6	8.8	29	42.26	+ 0.58	.....	+38.81	8 30 21.65
	9 Hydræ .....	9.3	22.8	36.5	50.4	4.3	33	36.66	+ 0.71	.....	+38.82	8 34 16.19
	$\epsilon$ Hydræ .....	9.8	23.4	36.7	50.2	3.5	37	36.72	+ 0.56	38.94	+38.82	8 38 16.10
	$\zeta$ Hydræ .....	49.4	2.7	16.1	29.4	42.7	39	16.06	+ 0.56	.....	+38.83	8 39 55.45
	$\zeta$ Hydræ .....	47.9	1.3	14.7	28.2	41.5	46	14.72	+ 0.56	.....	+38.83	8 46 54.11
	$\omega$ Hydræ .....	25.1	38.4	51.6	5.0	18.4	56	51.70	+ 0.57	.....	+38.85	8 57 31.12
	20 Hydræ .....	38.2	51.4	4.8	18.3	31.8	1	4.90	+ 0.66	.....	+38.85	9 1 44.41
	21 Hydræ .....	24.2	37.4	50.7	4.3	17.5	3	50.82	+ 0.66	.....	+38.85	9 4 30.33
	27 Hydræ .....	32.3	45.6	59.3	12.6	25.8	11	59.12	+ 0.67	.....	+38.86	9 12 38.65
	$\alpha$ Hydræ .....	35.5	48.9	2.4	15.8	29.2	19	2.36	+ 0.66	38.99	+38.87	9 19 41.89
	A. S. C. 1199 .....	39.5	53.1	6.8	20.4	34.1	54	6.78	+ 0.69	.....	+38.91	9 54 46.38
	$\nu^2$ Hydræ .....	11.7	25.4	39.0	52.4	6.2	56	38.94	+ 0.69	.....	+38.92	9 57 18.55
	$\lambda^2$ Hydræ .....	39.1	52.6	6.1	19.8	33.4	2	6.20	+ 0.68	.....	+38.92	10 2 45.80
	22 Sextantis .....	33.0	46.4	59.7	13.3	26.5	8	59.78	+ 0.66	.....	+38.93	10 9 39.37
	1 Hydræ & Crateris ...	19.5	33.3	47.2	1.0	14.8	27	47.16	+ 0.71	.....	+38.95	10 28 26.82
	40 Leonis Minoris ...	3.5	18.6	33.5	48.5	3.5	33	33.52	+ 0.39	.....	+38.95	10 34 12.86
	$\nu$ Hydræ & Crateris ...	35.4	49.2	3.1	16.8	30.5	41	3.00	+ 0.71	.....	+38.96	10 41 42.67
	55 Leonis .....	20.7	.....	.....	.....	14.0	46	47.35	+ 0.60	.....	.....	.....†
	.....	.....	34.3	47.6	0.9	.....	.....	47.60	+ 0.60	.....	+38.96	10 47 27.16
	$\alpha$ Hydræ & Crateris ...	50.3	4.1	18.0	31.8	45.5	51	17.94	+ 0.72	.....	+38.97	10 51 57.63
	Mars 1 Limb .....	32.0	.....	58.9	.....	26.0	7	58.97	+ 0.54	.....	+38.99	11 8 38.50
	Mars 2 Limb .....	.....	46.4	.....	13.2	.....	7	59.80	+ 0.54	.....	+38.99	11 8 39.33
	$\kappa$ Hydræ & Crateris ...	58.3	11.6	25.2	38.8	52.4	18	25.26	+ 0.68	.....	+39.00	11 19 4.94
	24 Hydræ & Crateris ...	24.6	38.3	51.8	5.4	19.1	29	51.84	+ 0.69	.....	+39.01	11 30 31.54
	$\zeta$ Hydræ & Crateris ...	30.7	44.5	58.5	12.4	26.4	35	58.50	+ 0.72	.....	+39.02	11 36 38.24
	$\circ$ Virginis .....	55.7	9.4	22.7	36.3	49.7	56	22.76	+ 0.54	.....	+39.05	11 57 2.35
	Groombridge 1850 ...	15.0	52.0	.....	5.0	42.0	56	28.49	- 7.86	.....	+39.05	11 56 59.68
	$\eta$ Virginis .....	35.8	49.2	2.5	15.8	29.2	11	2.50	+ 0.61	.....	+39.06	12 11 42.17
	Groombridge 1884 ...	24.0	25.0	26.0	.....	24.0	15	25.02	-20.83	.....	+39.07	12 15 43.26
	Moon 1 Limb .....	11.2	25.1	38.7	52.4	6.1	24	38.70	+ 0.67	.....	+39.08	12 25 18.45
	( $\alpha$ ) Moon 2 Limb .....	13.2	26.7	40.4	54.0	7.6	26	40.38	+ 0.67	.....	+39.08	12 27 20.13
	$\psi$ Virginis .....	54.5	8.0	21.4	34.7	48.3	45	21.38	+ 0.66	.....	+39.10	12 46 1.14
	Jupiter 1 Limb .....	.....	58.1	.....	25.0	.....	55	11.55	+ 0.64	.....	+39.11	12 55 51.30
	Jupiter 2 Limb .....	47.8	.....	14.5	.....	41.3	55	14.53	+ 0.64	.....	+39.11	12 55 54.28
	$\alpha$ Ursæ Min. S. P. ....	25.0	37.5	.....	5.0	13.5	59	50.27	+20.39	.....	+39.12	13 0 49.78
	$\theta$ Virginis .....	32.7	46.0	59.4	12.6	26.0	0	59.34	+ 0.65	.....	+39.12	13 1 39.11
	Pallas .....	38.4	52.2	5.6	19.4	33.1	13	5.74	+ 0.51	.....	+39.13	13 13 45.38
	Groombridge 2007 ...	31.5	24.0	17.5	11.0	2.5	21	17.30	- 6.13	.....	+39.14	13 21 50.31

(a) 0<sup>s</sup>.01 to be added to Apparent Right Ascension observed for defect of illuminated disc.



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpolated.			
Mar. 29	Ceres.....	16.7	30.2	43.6	57.0	10.4	m. 29	s. 43-58	+ 0.56	.....	+ 39.15	h. 13	m. 30	s. 23-29
Mar. 30	Sun 1 Limb.....	19.2	32.3	45.6	59.0	12.3	31	45-68	+ 0.78	.....	+ 39.90	0	32	26-36
	Sun 2 Limb.....	27.7	40.8	54.4	7.6	20.8	33	54-26	+ 0.78	.....	+ 39.90	0	34	34-94
	$\alpha$ Ursæ Minoris .....	5.0	15.5	27.5	41.0	54.5	0	28-70	-20.17	.....	+ 39.93	1	0	48-46
	Mercury 1 Limb .....	29.7	43.1	56.8	10.5	23.8	30	56-78	+ 0.72	.....	+ 39.96	1	31	37-46
	Venus 1 Limb.....	25.6	39.2	52.8	6.4	20.1	4	52-82	+ 0.71	.....	+ 40.00	2	5	33-53
	$\mu$ Geminorum.....	4.5	18.8	33.1	47.5	1.8	12	33-14	+ 0.61	+ 40.25	+ 40.28	6	13	14-03
	$\delta$ Ursæ Min. S. P. ....	54.0	37.5	20.5	3.5	.....	23	20-28	+ 10.50	.....	+ 40.29	6	24	11-07
	$\alpha$ Geminorum preced. ....	.....	23.4	.....	54.9	.....	23	39-15	+ 0.51	} 40.34 {	+ 40.36	7	24	20-02
	$\alpha$ Geminorum follow. ....	8.3	.....	39.7	.....	11.1	23	39-70	+ 0.51		+ 40.36	7	24	20-57
	$\alpha$ Canis Minoris .....	45.4	58.8	12.2	25.5	38.8	30	12-14	+ 0.77		+ 40.37	7	30	53-28
	$\beta$ Geminorum.....	17.7	32.8	47.8	2.9	18.0	34	47-84	+ 0.56	40.30	+ 40.37	7	35	28-77
	A. S. C. 1099 .....	18.1	37.8	57.8	17.6	37.5	51	57-76	+ 0.26	.....	+ 40.46	8	52	38-48
	$\omega$ Hydræ.....	23.1	36.4	49.8	3.1	16.5	56	49-78	+ 0.76	.....	+ 40.47	8	57	31-01
	27 Hydræ.....	30.4	43.7	57.3	10.4	24.2	11	57-20	+ 0.87	.....	+ 40.49	9	12	38-56
	$\alpha$ Hydræ.....	33.8	47.0	0.6	14.1	27.5	19	0-60	+ 0.87	40.53	+ 40.49	9	19	41-96
	$\tau^2$ Hydræ.....	40.0	53.4	6.5	19.7	32.8	23	6-48	+ 0.81	.....	+ 40.50	9	23	47-79
	$\pi$ Hydræ.....	28.0	41.6	55.3	8.8	22.2	31	55-18	+ 0.91	.....	+ 40.51	9	32	36-60
	6 Sextantis.....	0.8	14.1	27.4	40.7	53.9	42	27-38	+ 0.84	.....	+ 40.53	9	43	8-75
	21 Leonis Minoris ....	43.4	59.7	16.2	32.5	48.8	57	16-12	+ 0.46	.....	+ 40.55	9	57	57-13
	21 Sextantis.....	0.5	13.7	27.3	40.5	53.9	5	27-18	+ 0.86	.....	+ 40.56	10	6	8-60
	23 Sextantis.....	36.6	.....	.....	.....	29.8	12	3-20	+ 0.79	.....	+ 40.57	10	12	44-56
	.....	.....	49.6	3.1	16.3	.....	.....	3-00	+ 0.79	.....	.....	.....	.....	..... †
	30 Leonis Minoris ....	29.1	45.2	1.4	17.5	33.6	16	1-36	+ 0.48	.....	+ 40.57	10	16	42-41
	44 Leonis Minoris ....	52.8	8.1	23.2	38.4	53.5	40	23-20	+ 0.55	.....	+ 40.61	10	41	4-36
	Groombridge 1850....	11.5	49.0	26.0	2.5	.....	56	25-40	- 8.31	.....	+ 40.72	11	56	57-81
	$\downarrow$ Virginis.....	52.6	6.2	19.4	33.0	46.3	45	19-50	+ 0.87	.....	+ 40.79	12	46	1-16
	Jupiter 1 Limb.....	.....	.....	41.6	.....	8.2	54	41-60	+ 0.84	.....	+ 40.80	12	55	23-24
	Jupiter 2 Limb.....	.....	.....	.....	58.1	.....	54	44-78	+ 0.84	.....	+ 40.80	12	55	26-42
	$\alpha$ Ursæ Min. S. P. ...	21.0	.....	.....	58.0	.....	59	45-75	+ 22.07	.....	+ 40.81	13	0	48-63
	Moon 2 Limb .....	38.3	52.4	6.2	20.2	34.0	10	6-22	+ 0.91	.....	+ 40.82	13	10	47-95
	$\alpha$ Virginis.....	36.4	49.8	3.3	17.0	30.4	16	3-38	+ 0.88	40.85	+ 40.83	13	16	45-09
	Ceres .....	26.5	40.0	53.4	6.7	20.1	28	53-34	+ 0.75	.....	+ 40.85	13	29	34-94
April 4	$\alpha$ Geminorum preced. ....	57.7	.....	29.2	.....	0.5	23	29-13	+ 0.53	} + 50.34 {	+ 50.52	7	24	20-18
	$\alpha$ Geminorum follow. ....	.....	13.7	.....	45.3	.....	23	29-50	+ 0.53		+ 50.52	7	24	20-55
	$\epsilon$ Hydræ.....	57.8	11.2	24.6	38.0	51.3	37	24-58	+ 0.78		+ 50.63	8	38	15-99
	$\epsilon$ Leonis .....	23.6	38.0	52.4	7.6	21.8	35	52-68	+ 0.62		+ 50.71	9	36	44-01
April 7	$\gamma$ Aquilæ.....	11.4	24.7	38.4	51.9	5.4	37	38-36	+ 0.78	+ 57.79	+ 57.80	19	38	36-94
	$\beta$ Aquilæ.....	59.4	12.8	26.2	39.6	52.8	46	26-16	+ 0.82	57.90	+ 57.81	19	47	24-79
	$\alpha$ Cygni.....	20.6	39.5	58.2	16.8	35.4	34	58-10	+ 0.35	57.79	+ 57.88	20	35	56-33
	$\alpha$ Ursæ Minoris.....	44.5	57.5	11.0	23.5	35.0	0	10-80	-21.56	.....	+ 58.25	1	0	46-99
April 8	Sun 1 Limb.....	46.9	0.4	13.6	27.1	40.6	4	13-27	+ 0.81	.....	+ 58.26	1	5	12-79
	Sun 2 Limb.....	56.0	9.5	22.9	36.3	49.8	6	22-90	+ 0.81	.....	+ 58.26	1	7	21-97
	$\alpha$ Arietis.....	38.3	52.6	7.1	21.4	35.7	57	7-02	+ 0.66	58.37	+ 58.33	1	58	6-01
	Mercury 1 Limb .....	16.4	30.2	44.1	57.9	11.7	14	44-06	+ 0.72	.....	+ 58.36	2	15	43-14
	Venus 1 Limb.....	39.1	52.8	6.7	20.5	34.3	47	6-68	+ 0.72	.....	+ 58.41	2	48	5-81
	$\alpha$ Aurigæ.....	11.5	30.6	49.6	8.6	27.7	3	49-60	+ 0.33	58.56	+ 58.63	5	4	48-56
	$\beta$ Orionis.....	22.0	35.4	48.8	2.3	15.6	5	48-82	+ 0.94	58.56	+ 58.63	5	6	48-39
	$\beta$ Tauri.....	37.8	53.0	8.3	23.4	38.5	15	8-20	+ 0.60	58.61	+ 58.65	5	16	7-45
	$\alpha$ Geminorum preced. ....	.....	4.9	.....	36.4	.....	23	20-65	+ 0.55	} 58.79 {	+ 58.86	7	24	20-06
	$\alpha$ Geminorum follow. ....	49.5	.....	20.8	.....	52.4	23	20-90	+ 0.55		+ 58.86	7	24	20-31
	$\alpha$ Canis Minoris .....	26.6	40.2	53.5	6.8	20.2	29	53-46	+ 0.82		+ 58.87	7	30	53-15
	20 Hydræ.....	17.4	31.0	44.4	57.8	11.2	0	44-36	+ 0.94	.....	+ 59.02	9	1	44-32
	21 Hydræ.....	3.5	16.8	30.2	43.6	56.9	3	30-20	+ 0.92	.....	+ 59.03	9	4	30-15



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
April 8	23 Hydræ.....	16.5	29.8	43.2	56.5	9.8	7	43.16	+ 0.92	.....	h. m. s. 9 8 43.11
	27 Hydræ.....	11.7	25.1	38.5	51.9	5.4	11	38.52	+ 0.94	.....	9 12 38.50
	$\tau^2$ Hydræ.....	21.2	34.5	47.9	1.2	14.4	22	47.84	+ 0.87	.....	9 23 47.77
	$\alpha$ Hydræ.....	9.0	22.7	36.5	50.3	3.8	31	36.46	+ 0.98	.....	9 32 36.51
	10 Sextantis.....	.....	41.6	55.3	8.7	.....	46	55.20	+ 0.79	.....	9 47 55.09
	.....	28.0	.....	.....	.....	22.0	.....	55.00	+ 0.79	.....	.....†
	A. S. C. 1199.....	18.9	32.5	46.1	59.7	13.4	53	46.12	+ 0.97	.....	9 54 46.20
	21 Leonis Minoris...	24.6	40.8	57.5	13.8	30.3	56	57.40	+ 0.50	.....	9 57 57.01
	$\lambda^2$ Hydræ.....	18.4	32.0	45.5	59.4	12.6	1	45.58	+ 0.96	.....	10 2 45.66
	21 Sextantis.....	41.9	55.2	8.5	21.8	35.3	5	8.54	+ 0.93	.....	10 6 8.60
	22 Sextantis.....	12.4	25.7	39.3	42.6	6.0	8	39.20	+ 0.93	.....	10 9 39.26
	30 Leonis Minoris...	10.4	26.5	42.6	58.8	14.8	15	42.62	+ 0.52	.....	10 16 42.29
	1 Hydræ & Crateris..	58.7	12.3	26.5	40.4	54.0	27	26.38	+ 1.00	.....	10 28 26.55
	44 Leonis Minoris...	34.1	49.2	4.4	19.5	34.7	40	4.38	+ 0.59	.....	10 41 4.16
	6 Hydræ & Crateris...	10.2	24.4	38.5	52.6	6.6	44	38.46	+ 1.02	.....	10 45 38.67
	$\alpha$ Hydræ & Crateris...	29.5	43.5	57.5	11.4	25.4	50	57.46	+ 1.01	.....	10 51 57.67
	Mars 1 Limb.....	.....	49.3	.....	16.2	.....	58	2.75	+ 0.80	.....	10 59 2.77
	Mars 2 Limb.....	36.6	.....	3.7	.....	30.5	58	3.60	+ 0.80	.....	10 59 3.62
	$\alpha$ Hydræ & Crateris...	37.5	51.1	4.5	18.2	31.5	18	4.56	+ 0.96	.....	11 19 4.77
	86 Leonis.....	38.4	52.6	6.7	20.6	34.7	21	6.60	+ 0.70	.....	11 22 6.55
	24 Hydræ & Crateris..	3.8	17.5	31.1	44.6	58.3	29	31.06	+ 0.97	.....	11 30 31.29
	Groombridge 1884...	3.0	1.0	2.0	5.0	8.5	15	3.90	- 23.82	.....	12 15 39.42
	Groomb. 144 S. P....	28.0	.....	13.0	6.0	2.0	40	13.90	+ 19.93	.....	12 41 33.21
	A. S. C. 91 S. P....	56.5	41.0	25.5	.....	57.0	46	26.32	+ 8.56	.....	12 47 34.27
	Jupiter 1 Limb.....	.....	54.2	.....	21.0	.....	50	7.60	+ 0.90	.....	12 51 7.89
	Jupiter 2 Limb.....	43.8	.....	19.6	.....	37.3	50	10.57	+ 0.90	.....	12 51 10.86
	$\alpha$ Ursæ Minoris S. P.	59.5	11.0	25.0	36.0	49.5	59	24.20	+ 23.58	.....	13 0 47.19
	Pallas.....	53.7	7.7	21.7	35.5	49.4	5	21.60	+ 0.72	.....	13 6 21.74
	Groombridge 2007...	12.0	4.5	.....	49.5	43.0	20	57.22	- 6.90	.....	13 21 49.76
April 9	$\mu$ Geminorum.....	43.4	57.7	12.1	26.5	40.8	12	12.10	+ 0.58	+ 61.16	6 13 13.77
	$\delta$ Ursæ Minoris S. P.	36.5	19.5	2.5	44.5	28.0	23	2.20	+ 10.11	.....	.....
	$\alpha$ Canis Majoris.....	34.0	47.7	1.6	15.5	29.5	37	1.66	+ 0.87	61.19	6 38 3.66
	15 Lyncis.....	28.0	53.6	19.1	44.6	10.2	42	19.10	- 0.04	.....	6 43 20.20
	19 Monocerotis.....	26.9	40.3	53.7	7.2	20.4	53	53.70	+ 0.79	.....	6 54 55.65
	22 Monocerotis.....	10.9	24.1	37.4	50.6	3.8	2	37.36	+ 0.76	.....	7 3 39.29
	$\delta$ Geminorum.....	0.7	15.1	29.4	43.7	58.1	9	29.40	+ 0.58	61.19	7 10 31.17
	$\delta^1$ Canis Minoris.....	16.3	29.7	43.0	56.2	9.6	22	42.96	+ 0.74	.....	7 23 44.91
	$\delta^3$ Canis Minoris.....	21.3	34.6	47.9	1.2	14.5	24	47.90	+ 0.73	.....	7 25 49.84
	$\alpha$ Canis Minoris.....	24.5	37.8	51.2	4.5	17.8	29	51.16	+ 0.72	61.26	7 30 53.10
	$\beta$ Geminorum.....	56.7	11.8	27.0	42.1	57.2	34	26.96	+ 0.52	61.04	7 35 28.71
	Mars 1 Limb.....	50.8	.....	17.8	.....	44.9	57	17.83	+ 0.69	.....	10 58 20.10
	Mars 2 Limb.....	.....	5.2	.....	32.3	.....	57	18.75	+ 0.69	.....	10 58 21.02
	Pallas.....	7.2	21.1	35.0	48.8	2.7	4	34.96	+ 0.62	.....	13 5 37.38
	Ceres.....	34.6	48.1	1.4	14.7	28.2	20	1.40	+ 0.70	.....	13 21 3.93
April 10	$\alpha$ Ursæ Minoris.....	43.5	55.5	10.0	21.0	33.5	0	8.70	- 18.75	.....	1 0 52.99
	Sun 1 Limb.....	1.3	15.0	28.5	41.7	55.2	11	28.34	+ 0.67	.....	1 12 32.07
	Sun 2 Limb.....	10.8	24.0	37.7	51.0	4.4	13	37.58	+ 0.67	.....	1 14 41.31
	$\alpha$ Arietis.....	33.7	48.0	2.4	16.7	31.2	57	2.40	+ 0.55	+ 63.10	1 58 6.09
	Mercury 1 Limb....	20.4	34.4	48.2	2.2	16.2	20	48.28	+ 0.59	.....	2 21 52.05
	Venus 1 Limb.....	12.0	26.0	40.0	53.9	7.9	56	39.96	+ 0.59	.....	2 57 43.79
	$\eta$ Tauri.....	22.5	36.8	51.3	5.8	20.4	36	51.36	+ 0.54	63.33	3 37 55.21
	$\alpha$ Tauri.....	9.6	23.5	37.4	51.2	5.1	25	37.36	+ 0.60	63.37	4 26 41.36
	$\mu$ Geminorum.....	41.0	55.4	9.8	24.2	38.6	12	9.80	+ 0.55	63.48	6 13 13.91
	$\delta$ Ursæ Minoris S. P.	34.0	17.0	0.0	42.0	25.0	22	59.60	+ 9.74	.....	6 24 12.91
	$\alpha$ Canis Majoris.....	31.6	45.5	59.4	13.3	27.2	36	59.40	+ 0.51	63.79	6 38 3.50
	15 Lyncis.....	25.6	51.2	16.8	42.2	7.8	42	16.72	- 0.05	.....	6 43 20.27

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock observed. interpolated.		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.						
April 10	A. C. S. 874.....	22.0	7.0	51.6	37.0	22.0	55	51.92	- 3.29	.....	+ 63.62	h. m. s. 6 56 52.25
	ε Canis Minoris.....	20.3	33.8	47.4	0.8	14.4	15	47.34	+ 0.65	.....	+ 63.65	7 16 51.64
	20 Hydræ.....	12.8	26.3	39.6	53.1	6.5	0	39.66	+ 0.78	.....	+ 63.81	9 1 44.25
	21 Hydræ.....	58.7	12.2	25.6	39.0	52.5	3	25.60	+ 0.76	.....	+ 63.82	9 4 30.18
	23 Hydræ.....	11.6	25.0	38.4	52.0	5.4	7	38.48	+ 0.76	.....	+ 63.82	9 8 43.06
	40 Lyncis.....	38.9	55.3	11.6	27.7	43.8	10	11.46	+ 0.42	.....	+ 63.83	9 11 15.71
	ε <sup>2</sup> Hydræ.....	16.6	29.7	43.0	56.4	9.7	22	43.08	+ 0.72	.....	+ 63.84	9 23 47.64
	ζ Hydræ.....	4.2	18.2	31.6	45.6	59.2	31	31.76	+ 0.81	.....	+ 63.86	9 32 36.43
	6 Sextantis.....	37.3	50.7	4.0	17.5	30.6	42	4.02	+ 0.74	.....	+ 63.87	9 43 8.63
	A. S. C. 1195.....	52.2	.....	.....	.....	45.5	50	18.85	+ 0.69	.....	+ 63.89	9 51 23.43
	.....	.....	5.1	18.5	31.7	.....	.....	18.43	+ 0.69	.....	.....	.....†
	21 Leonis Minoris.....	20.0	36.5	52.9	9.2	25.6	56	52.84	+ 0.41	.....	+ 63.90	9 57 57.15
	21 Sextantis.....	37.1	50.5	3.7	17.2	30.6	5	3.82	+ 0.77	.....	+ 63.91	10 6 8.50
	22 Sextantis.....	7.8	21.2	34.6	48.1	1.4	8	34.62	+ 0.77	.....	+ 63.91	10 9 39.30
	Mars 1 Limb.....	.....	22.1	.....	.....	.....	56	35.57	+ 0.65	.....	+ 63.98	10 57 40.20
	Mars 2 Limb.....	.....	.....	.....	.....	3.4	56	36.46	+ 0.65	.....	+ 63.98	10 57 41.09
	Groombridge 1884.....	56.0	54.0	55.0	57.5	59.0	14	56.30	- 20.72	.....	+ 64.10	12 15 39.68
	Jupiter 1 Limb.....	40.0	.....	6.7	.....	33.1	49	6.60	+ 0.74	.....	+ 64.15	12 50 11.49
	Jupiter 2 Limb.....	.....	56.4	.....	22.8	.....	49	9.60	+ 0.74	.....	+ 64.15	12 50 14.49
	α Ursæ Minoris S. P. ....	4.0	.....	27.0	40.0	54.0	59	28.18	+ 20.47	.....	+ 64.17	13 0 52.82
	Pallas.....	.....	.....	.....	2.3	16.2	3	48.39	+ 0.58	.....	+ 64.18	13 4 53.15
April 11	Sun 1 Limb.....	39.2	52.8	5.9	19.5	33.1	15	6.10	+ 0.70	.....	+ 65.28	1 16 12.08
	Sun 2 Limb.....	48.3	2.0	15.4	28.8	42.3	17	15.36	+ 0.70	.....	+ 65.28	1 18 21.34
	(a) Venus 1 Limb.....	.....	14.2	28.3	42.1	56.1	2	28.19	+ 0.62	.....	+ 5.44	3 2 34.25
	α Tauri.....	7.4	21.3	35.1	48.8	2.8	26	35.08	+ 0.63	+ 5.61	+ 5.56	4 26 41.27
	δ Geminorum.....	56.1	10.4	24.6	39.1	53.4	10	24.72	+ 0.57	5.85	+ 5.81	7 10 31.10
	α Geminorum preced.....	.....	57.7	.....	29.3	.....	24	13.50	+ 0.47	{ 5.86 }	+ 5.84	7 24 19.81
	α Geminorum follow.....	42.4	.....	14.0	.....	45.4	24	13.93	+ 0.47		+ 5.84	7 24 20.24
	α Canis Minoris.....	19.8	33.2	46.6	59.9	13.3	30	46.56	+ 0.71	5.84	+ 5.85	7 30 53.12
	β Geminorum.....	51.8	7.1	22.3	37.4	52.5	35	22.22	+ 0.52	5.75	+ 5.85	7 35 28.59
	α Ursæ Minoris.....	.....	.....	5.5	17.5	29.5	1	5.50	- 21.27	.....	+ 7.49	1 0 51.72
April 12	Sun 1 Limb.....	17.2	30.7	44.1	57.6	11.1	19	44.14	+ 0.72	.....	+ 7.52	1 19 52.38
	Sun 2 Limb.....	26.6	40.1	53.6	6.9	20.4	21	53.52	+ 0.72	.....	+ 7.52	1 22 1.76
	α Arietis.....	29.0	43.4	57.7	12.0	26.6	57	57.74	+ 0.59	+ 7.73	+ 7.58	1 58 5.91
	Venus 1 Limb.....	49.4	3.4	17.2	31.3	45.3	7	17.32	+ 0.64	.....	+ 7.69	3 7 25.65
	μ Geminorum.....	36.6	50.8	5.2	19.6	34.2	13	5.28	+ 0.59	7.93	+ 7.98	6 13 13.85
	δ Ursæ Minoris S. P. ....	31.0	13.5	56.5	39.5	23.0	23	56.70	+ 10.98	.....	+ 8.00	6 24 15.68
	α Canis Majoris.....	27.1	41.0	54.8	8.6	22.6	37	54.82	+ 0.92	7.92	+ 8.02	6 38 3.76
	α Ursæ Minoris.....	.....	50.5	.....	.....	.....	1	2.40	- 21.29	.....	+ 9.75	1 0 50.86
April 13	Sun 1 Limb.....	56.1	9.8	.....	36.5	50.1	23	23.12	+ 0.70	.....	.....	.....
	Sun 2 Limb.....	5.7	19.3	32.6	46.2	59.6	25	32.68	+ 0.70	.....	.....	.....
	(b) α Geminorum preced.....	48.2	.....	19.7	.....	51.1	24	19.67	+ 0.45	{ - 0.29 }	- 0.25	7 24 19.87
	α Geminorum follow.....	.....	4.4	.....	35.7	.....	20	20.05	+ 0.45		- 0.25	7 24 20.25
	α Canis Minoris.....	25.9	39.4	52.7	6.1	19.4	30	52.70	+ 0.72	0.34	- 0.27	7 30 53.15
	β Geminorum.....	58.2	13.4	28.5	43.5	58.6	35	28.44	+ 0.51	0.49	- 0.27	7 35 28.68
	δ Leonis.....	5.9	20.2	34.5	48.8	3.2	5	34.52	+ 0.58	0.63	- 0.80	11 5 34.30
	β Leonis.....	25.4	39.1	52.8	6.5	20.5	40	52.86	+ 0.63	0.75	- 0.89	11 40 52.60
April 15	α Ursæ Minoris S. P. ....	4.0	.....	32.0	42.5	.....	0	30.13	+ 23.11	.....	- 1.10	13 0 52.14
	α Geminorum preced.....	55.4	.....	26.7	.....	58.3	24	26.80	+ 0.45	{ - 7.45 }	- 7.52	7 24 19.73
	α Geminorum follow.....	.....	11.5	.....	42.8	.....	24	27.15	+ 0.45		- 7.52	7 24 20.08
	α Canis Minoris.....	33.3	46.5	59.8	13.2	26.4	30	59.84	+ 0.72	7.51	- 7.54	7 30 53.02
	β Geminorum.....	5.5	20.5	35.6	50.6	5.7	35	35.58	+ 0.51	7.67	- 7.55	7 35 28.54
	Ceres.....	31.7	45.5	58.8	12.3	25.6	15	58.78	+ 0.70	.....	- 8.41	13 15 51.07
	ζ Virginis.....	12.7	26.1	39.4	52.5	5.8	26	39.30	+ 0.77	.....	- 8.44	13 26 31.63

(a) Clock put forward one minute.

(b) The Clock was taken away by Mr Bryson to be cleaned. For the following observations the Circle Clock was employed, which in calm weather is heard at the Transit Instrument.



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.	m.	s.		observed.	interpo- lated.	
April 15	82 Virginis.....	52.8	6.5	19.8	33.2	46.6	33	19.78	+ 0.83	.....	- 8.46	h. m. s. 13 33 12-15
April 16	INSTRUMENT REVERSED.											
April 17	(a) $\alpha$ Geminorum preced.	.....	7.8	.....	39.3	.....	24	23.55	+ 0.62	} - 4.48	- 4.69	7 24 19.48
	$\alpha$ Geminorum follow.	52.6	.....	24.1	.....	55.5	24	24.07	+ 0.62		- 4.69	7 24 20.00
	$\alpha$ Canis Minoris.....	29.9	43.4	56.7	10.1	23.5	30	56.72	+ 0.84	4.55	- 4.68	7 30 52.88
	$\beta$ Geminorum .....	2.0	17.2	32.4	47.5	2.5	35	32.32	+ 0.65	4.58	- 4.67	7 35 28.30
	$\epsilon$ Leonis.....	18.6	33.0	47.6	2.3	16.9	36	47.68	+ 0.67	4.48	- 4.43	9 36 43.92
	$\delta$ Sextantis.....	45.8	59.0	12.4	25.7	38.9	43	12.36	+ 0.91	.....	- 4.42	9 43 8.85
	$\alpha$ Leonis.....	25.3	39.0	52.9	6.7	20.2	59	52.82	+ 0.77	4.38	- 4.38	9 59 49.21
	$\mu$ Ursæ Majoris .....	13.4	31.2	49.2	7.1	25.0	12	49.18	+ 0.50	.....	- 4.35	10 12 45.33
	30 Leonis Minoris .....	13.9	30.2	46.4	2.5	18.5	16	46.30	+ 0.59	.....	- 4.34	10 16 42.55
	40 Leonis Minoris .....	47.1	1.8	16.8	31.7	46.7	34	16.82	+ 0.66	.....	- 4.31	10 34 13.17
	Mars 1 Limb .....	0.1	.....	27.0	.....	53.8	54	26.97	+ 0.80	.....	- 4.27	10 54 23.50
	Mars 2 Limb .....	.....	14.3	.....	41.3	.....	54	27.80	+ 0.80	.....	- 4.27	10 54 24.33
	$\alpha$ Hydræ & Crateris...	41.4	55.0	8.5	21.8	35.5	19	8.44	+ 0.97	.....	- 4.22	11 19 5.19
	$\beta$ Leonis.....	28.6	42.6	56.4	10.1	23.8	40	56.30	+ 0.94	4.51	- 4.18	11 40 53.06
	2 Comæ Berenices...	38.4	53.1	7.5	21.8	36.3	56	7.42	+ 0.70	.....	- 4.14	11 56 3.98
	Groomb. 144 S. P....	42.5	.....	30.5	22.0	14.5	41	29.20	+ 11.29	.....	- 4.06	12 41 36.43
	Jupiter 1 Limb.....	35.9	.....	.....	.....	29.2	47	2.55	+ 0.91	.....	- 4.04	12 46 59.42
	Jupiter 2 Limb.....	.....	52.2	.....	18.7	.....	47	5.45	+ 0.91	.....	- 4.04	12 47 2.32
	(b) Pallas.....	31.7	45.5	.....	.....	27.8	59	59.68	+ 0.72	.....	- 4.02	12 59 56.38
	$\alpha$ Ursæ Minoris S. P.	17.5	30.0	.....	53.5	7.5	0	42.21	+ 13.33	.....	- 4.02	.....
	(b) Ceres .....	45.6	.....	.....	.....	39.4	14	12.50	+ 0.81	.....	- 3.99	13 14 9.32
	$\alpha$ Ursæ Minoris .....	.....	.....	.....	16.0	.....	1	4.20	- 9.35	.....	- 2.57	1 0 52.28
April 18	Venus 1 Limb.....	.....	.....	58.3	12.5	.....	36	58.30	+ 0.63	.....	- 2.26	3 36 56.67
	$\beta$ Tauri.....	38.6	53.6	8.7	23.8	38.8	16	8.70	+ 0.57	- 1.98	- 2.06	5 16 7.21
	$\alpha$ Orionis .....	2.2	15.5	29.0	42.5	55.8	46	29.00	+ 0.73	2.01	- 2.00	5 46 27.73
	Moon 1 Limb.....	1.7	17.2	33.0	48.3	3.8	12	32.80	+ 0.59	.....	- 1.95	6 12 31.44
	$\delta$ Ursæ Minoris S. P.	.....	31.0	13.5	57.0	39.5	24	13.80	+ 5.16	.....	- 1.93	6 24 17.03
	$\epsilon$ Geminorum .....	34.0	48.7	3.4	18.2	32.8	34	3.42	+ 0.59	.....	- 1.91	6 34 2.10
	$\alpha$ Canis Majoris .....	37.0	50.8	4.7	18.5	32.4	38	4.68	+ 0.90	2.01	- 1.90	6 38 3.68
	$\tau$ Geminorum.....	24.5	39.9	55.4	10.8	26.2	0	55.36	+ 0.56	.....	- 1.86	7 0 54.06
	$\alpha$ Geminorum preced.	49.5	.....	21.0	.....	52.4	24	20.97	+ 0.55	} 1.75	- 1.81	7 24 19.71
	$\alpha$ Geminorum follow.	.....	5.6	.....	37.0	.....	24	21.30	+ 0.55		- 1.81	7 24 20.04
	$\alpha$ Canis Minoris .....	27.4	40.7	54.1	7.4	20.7	30	54.06	+ 0.73	1.79	- 1.80	7 30 52.99
	$\beta$ Geminorum .....	59.5	14.5	29.6	44.6	59.8	35	29.60	+ 0.57	1.80	- 1.79	7 35 28.38
	$\mu$ Ursæ Majoris.....	10.6	28.6	46.5	4.5	22.5	12	46.54	+ 0.46	.....	- 1.51	10 12 45.49
	40 Leonis Minoris .....	44.0	59.1	14.0	28.8	43.8	34	13.94	+ 0.58	.....	- 1.47	10 34 13.05
	Mars 1 Limb .....	.....	54.4	.....	21.4	.....	54	7.90	+ 0.70	.....	- 1.43	10 54 7.17
	Mars 2 Limb .....	41.8	.....	8.8	.....	35.8	54	8.80	+ 0.70	.....	- 1.43	10 54 8.07
	67 Leonis.....	43.8	58.7	13.5	28.2	42.8	0	13.40	+ 0.59	.....	- 1.42	11 0 12.57
	93 Leonis.....	15.2	29.5	43.7	57.8	12.2	39	43.68	+ 0.63	.....	- 1.35	11 39 42.96
	Groomb. 144 S. P....	39.0	33.0	25.5	19.0	11.5	41	25.60	+ 9.02	.....	- 1.23	12 41 33.39
	Jupiter 1 Limb.....	.....	19.8	.....	46.2	.....	46	33.00	+ 0.80	.....	- 1.23	12 46 32.57
	Jupiter 2 Limb.....	9.5	.....	35.9	.....	2.7	46	36.03	+ 0.80	.....	- 1.23	12 46 35.60
	Pallas .....	48.8	2.8	17.0	31.0	45.2	59	16.96	+ 0.64	.....	- 1.20	12 59 16.40
	$\alpha$ Ursæ Minoris S. P.	20.0	.....	42.5	54.0	6.5	0	42.80	+ 10.63	.....	- 1.20	13 0 52.23
	Ceres .....	52.4	5.7	19.3	32.6	46.0	13	19.20	+ 0.71	.....	- 1.18	13 13 18.73
	Groombridge 2007....	10.0	4.0	56.0	49.0	42.0	21	56.20	- 2.86	.....	- 1.16	13 21 52.18
	$\alpha$ Ursæ Minoris.....	38.0	.....	1.5	14.0	.....	1	1.73	- 9.70	.....	+ 0.12	1 0 52.15
April 19	$\epsilon$ Geminorum .....	31.2	45.7	0.6	15.4	30.1	34	0.60	+ 0.61	.....	+ 0.73	6 34 1.94
	$\alpha$ Canis Majoris .....	34.2	48.2	1.8	15.7	29.6	38	1.90	+ 0.92	+ 0.73	+ 0.74	6 38 3.56
	Moon 1 Limb .....	33.3	48.8	4.1	19.3	34.7	16	4.04	+ 0.62	.....	+ 0.81	7 16 5.47

(a) The Clock having been cleaned was replaced.

(b) Very faint.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
April 19	$\alpha$ Geminorum preced.	s. ....	s. 2.5	s. ....	s. 33.8	s. ....	m. 24	s. 18.15	+ 0.56	} + 0.96	+ 0.83	h. m. s. 7 24 19.54
	$\alpha$ Geminorum follow.	47.3	.....	18.6	.....	50.0	24	18.63	+ 0.56		+ 0.83	7 24 20.02
	$\alpha$ Canis Minoris	24.6	37.8	51.3	4.6	18.1	30	51.28	+ 0.75	0.95	+ 0.84	7 30 52.87
	$\alpha$ Leonis	20.3	33.9	47.3	1.1	14.7	59	47.46	+ 0.70	1.03	+ 1.11	9 59 49.27
	Mars 1 Limb	24.7	.....	51.8	.....	18.8	53	51.77	+ 0.72	.....	+ 1.21	10 53 53.70
	Mars 2 Limb	.....	39.3	.....	6.2	.....	53	52.75	+ 0.72	.....	+ 1.21	10 53 54.68
	67 Leonis	41.4	55.8	10.8	25.5	40.3	0	10.76	+ 0.61	.....	+ 1.22	11 0 12.59
	$\delta$ Leonis	4.1	18.6	32.7	46.8	1.3	5	32.70	+ 0.64	1.08	+ 1.23	11 5 34.57
	Jupiter 1 Limb	37.7	.....	4.0	.....	30.5	46	4.07	+ 0.82	.....	+ 1.41	12 46 6.30
	Jupiter 2 Limb	.....	53.8	.....	20.2	.....	46	7.00	+ 0.82	.....	+ 1.41	12 46 9.23
	Pallas	6.8	21.1	35.1	49.3	3.3	58	35.12	+ 0.65	.....	+ 1.44	12 58 37.21
	$\alpha$ Ursæ Minoris S. P.	15.0	26.0	40.0	53.0	3.5	0	39.50	+ 11.02	.....	+ 1.44	13 0 51.96
	Ceres	59.7	13.2	26.5	39.8	53.4	12	26.52	+ 0.73	.....	+ 1.46	13 12 28.71
	$\alpha$ Ursæ Minoris	.....	.....	.....	11.0	.....	0	59.30	- 10.77	.....	+ 2.76	1 0 51.29
April 20	(a) Sun 1 Limb	55.9	9.8	23.2	36.8	50.4	49	23.22	+ 0.75	.....	+ 3.01	1 49 26.98
	Sun 2 Limb	6.3	19.8	33.4	47.0	0.5	51	33.40	+ 0.75	.....	+ 3.01	1 51 37.16
	$\alpha$ Aurigæ	6.3	25.3	44.4	3.6	22.7	4	44.46	+ 0.43	+ 3.41	+ 3.31	5 4 48.20
	$\beta$ Orionis	17.0	30.4	43.7	57.2	10.7	6	43.80	+ 0.90	3.48	+ 3.32	5 6 48.02
	$\beta$ Tauri	33.0	48.2	3.3	18.5	33.5	16	3.30	+ 0.61	3.35	+ 3.33	5 16 7.24
	Mars 1 Limb	.....	25.2	.....	52.1	.....	53	38.65	+ 0.76	.....	+ 3.87	10 53 43.28
	Mars 2 Limb	12.7	.....	39.8	.....	6.7	53	39.73	+ 0.76	.....	+ 3.87	10 53 44.36
	$\delta$ Leonis	1.4	15.6	30.0	44.3	58.5	5	29.96	+ 0.67	3.79	+ 3.89	11 5 34.52
	$\delta$ Hydræ & Crateris	47.2	1.1	14.7	28.6	42.2	11	14.76	+ 0.95	3.73	+ 3.90	11 11 19.61
	Jupiter 1 Limb	.....	22.1	.....	48.7	.....	45	35.40	+ 0.86	.....	+ 4.05	12 45 40.31
	Jupiter 2 Limb	11.6	.....	38.3	.....	4.9	45	38.27	+ 0.86	.....	+ 4.05	12 45 43.18
	Pallas	25.8	40.2	54.2	8.3	22.5	57	54.20	+ 0.68	.....	+ 4.07	12 57 58.95
	$\alpha$ Ursæ Minoris S. P.	.....	25.0	34.0	46.0	59.0	0	35.08	+ 12.17	.....	+ 4.07	13 0 51.32
	Ceres	7.7	21.4	34.6	.....	.....	11	34.63	+ 0.76	.....	+ 4.18	13 11 39.57
April 21	$\delta$ Cancri	58.4	12.2	26.3	40.3	54.4	35	26.32	+ 0.73	.....	+ 5.92	8 35 32.97
	$\xi$ Cancri	31.4	45.8	0.4	14.8	29.3	0	0.34	+ 0.69	.....	+ 5.96	9 0 6.99
	$\pi^1$ Cancri	55.6	9.4	23.3	37.1	50.7	3	23.22	+ 0.76	.....	+ 5.96	9 3 29.94
	$\pi^2$ Cancri	47.0	0.8	14.7	28.6	42.4	6	14.70	+ 0.76	.....	+ 5.97	9 6 21.43
	Moon 1 Limb	15.6	30.0	44.4	58.7	13.1	8	44.36	+ 0.74	.....	+ 5.97	9 8 51.07
	$\alpha$ Hydræ	7.8	21.3	34.6	48.1	1.5	19	34.66	+ 0.96	+ 6.11	+ 5.99	9 19 41.61
	$\lambda$ Leonis	57.4	11.6	26.2	40.6	55.2	22	26.20	+ 0.69	.....	+ 5.99	9 22 32.88
	$\psi$ Leonis	24.5	38.3	52.0	5.6	19.5	34	51.98	+ 0.77	.....	+ 6.01	9 34 58.76
	$\epsilon$ Leonis	7.8	22.4	36.9	51.4	6.2	36	36.94	+ 0.68	6.19	+ 6.02	9 36 43.64
	$\alpha$ Leonis	15.4	29.0	42.7	56.2	9.8	59	42.62	+ 0.78	5.77	+ 6.05	9 59 49.45
April 23	(b) Venus 1 Limb	30.2	44.5	58.9	13.2	27.4	1	58.84	+ 0.76	.....	+ 0.54	4 2 0.14
	$\alpha$ Tauri	12.2	25.7	39.8	53.6	7.5	26	39.76	+ 0.82	+ 0.65	+ 0.56	4 26 41.14
	$\alpha$ Aurigæ	9.0	28.2	47.2	6.3	25.3	4	47.20	+ 0.47	0.60	+ 0.59	5 4 48.26
	$\beta$ Orionis	19.7	33.2	46.6	0.2	13.6	6	46.66	+ 1.04	0.46	+ 0.59	5 6 48.29
	$\beta$ Tauri	35.8	50.7	5.9	21.1	36.2	16	5.94	+ 0.69	0.61	+ 0.59	5 16 7.22
	$\alpha$ Leonis	20.5	34.0	47.5	1.1	14.6	59	47.54	+ 0.84	0.77	+ 0.77	9 59 49.15
	$\alpha$ Ursæ Minoris S. P.	.....	.....	37.0	.....	59.0	0	36.35	+ 15.63	.....	+ 0.89	.....
April 24	Sun 1 Limb	54.2	7.6	21.3	35.0	48.6	4	21.34	+ 0.75	.....	+ 1.40	2 4 23.49
	Sun 2 Limb	4.7	18.5	32.0	45.7	59.4	6	32.06	+ 0.75	.....	+ 1.40	2 6 34.21
	Venus 1 Limb	32.7	47.2	1.7	16.1	30.5	7	1.64	+ 0.68	.....	+ 1.47	4 7 3.79
	$\alpha$ Tauri	11.5	25.2	39.2	52.7	6.5	26	39.02	+ 0.73	+ 1.48	+ 1.49	4 26 41.24
	$\alpha$ Aurigæ	8.0	27.2	46.4	5.5	24.5	4	46.32	+ 0.43	1.51	+ 1.51	5 4 48.26
	(c) $\alpha$ Geminorum preced.	.....	1.7	.....	33.2	.....	24	17.45	+ 0.60	} + 1.53	+ 1.52	7 24 19.57
	$\alpha$ Geminorum follow.	46.5	.....	18.0	.....	49.4	24	17.97	+ 0.60		+ 1.52	7 24 20.09
	$\alpha$ Canis Minoris	23.7	37.3	50.5	3.9	17.3	30	50.54	+ 0.82	1.55	+ 1.52	7 30 52.88
	$\beta$ Geminorum	55.8	11.0	26.2	41.4	56.5	35	26.18	+ 0.63	1.47	+ 1.52	7 35 28.33

(a) At 1<sup>h</sup> 46<sup>m</sup> three pieces of Wire were laid on the jar of the Pendulum.(b) Clock stopped on April 22 at 3<sup>h</sup> 23<sup>m</sup> and Pendulum altered.(c) At 6<sup>h</sup> 31<sup>m</sup> three pieces of Wire were laid on the jar of the Pendulum.



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpol- ated.	
April 24	Mars 1 Limb .....	0.5	.....	27.4	.....	54.4	53 27.43	+ 0.78	.....	+ 1.50	10 53 29.71
	Mars 2 Limb .....	.....	15.0	.....	41.9	.....	53 28.45	+ 0.78	.....	+ 1.50	10 53 30.73
	α Leonis .....	15.6	28.8	42.4	55.8	9.3	56 42.38	+ 0.79	.....	+ 1.50	10 56 44.67
	γ Leonis .....	12.5	25.7	39.2	52.5	5.8	19 39.14	+ 0.83	.....	+ 1.50	11 19 41.47
	Moon 1 Limb .....	49.7	3.2	16.7	30.1	43.7	28 16.68	+ 0.84	.....	+ 1.50	11 28 19.02
	β Virginis .....	51.7	5.2	18.5	31.7	45.2	42 18.46	+ 0.83	.....	+ 1.50	11 42 20.79
	ο Virginis .....	33.4	47.1	0.5	13.8	27.4	57 0.44	+ 0.78	.....	+ 1.50	11 57 2.72
	Jupiter 1 Limb .....	30.4	.....	57.0	.....	23.7	43 57.03	+ 0.95	.....	+ 1.50	12 43 59.48
	Jupiter 2 Limb .....	.....	46.8	.....	13.3	.....	44 0.05	+ 0.95	.....	+ 1.50	12 44 2.50
April 26	α Ursæ Minoris S. P. ....	.....	27.0	.....	.....	.....	0 38.60	+ 12.92	.....	+ 1.50	.....
	α Leonis .....	19.6	33.3	46.8	0.5	14.2	59 46.88	+ 0.66	+ 1.57	+ 1.30	9 59 48.84
	Mars 1 Limb .....	10.6	.....	37.4	.....	4.4	53 37.47	+ 0.68	.....	+ 1.29	10 53 39.44
	Mars 2 Limb .....	.....	24.7	.....	51.6	.....	53 38.15	+ 0.68	.....	+ 1.29	10 53 40.12
	δ Leonis .....	4.0	18.3	32.5	46.8	1.2	5 32.56	+ 0.60	1.21	+ 1.29	11 5 34.45
	β Leonis .....	23.4	.....	.....	4.6	18.2	40 50.81	+ 0.64	1.23	+ 1.29	11 40 52.74
	γ Virginis .....	.....	.....	.....	43.7	57.0	33 30.43	+ 0.75	.....	+ 1.30	12 33 32.48
	Jupiter 1 Limb .....	.....	55.4	.....	22.0	.....	43 8.70	+ 0.77	.....	+ 1.30	12 43 10.77
	Jupiter 2 Limb .....	45.2	.....	11.5	.....	38.2	43 11.63	+ 0.77	.....	+ 1.30	12 43 13.70
	12 Canum Venat. ....	56.2	13.5	30.6	47.6	4.8	48 30.54	+ 0.45	1.09	+ 1.30	12 48 32.29
	Moon 1 Limb .....	52.5	6.3	20.2	33.8	47.3	54 20.02	+ 0.82	.....	+ 1.30	12 54 22.14
	α Ursæ Minoris S. P. ....	.....	.....	42.5	52.0	.....	0 41.50	+ 10.98	.....	+ 1.30	.....
	Ceres .....	.....	.....	.....	10.0	23.5	6 56.62	+ 0.69	.....	+ 1.30	13 6 58.61
	α Virginis .....	16.3	29.6	43.1	56.7	10.1	16 43.16	+ 0.82	1.33	+ 1.30	13 16 45.28
April 27	Sun 1 Limb .....	10.7	24.2	38.2	51.7	5.5	15 38.06	+ 0.67	.....	+ 1.41	2 15 40.14
	Sun 2 Limb .....	21.7	35.5	49.2	3.0	16.7	17 49.22	+ 0.67	.....	+ 1.41	2 17 51.30
	α Leonis .....	.....	.....	.....	0.2	14.0	59 46.70	+ 0.67	+ 1.73	+ 1.48	9 59 48.85
	δ Leonis .....	3.8	17.8	32.2	46.5	.....	5 32.21	+ 0.61	1.54	+ 1.49	11 5 31.31
	α Ursæ Minoris S. P. ....	.....	.....	.....	53.0	.....	0 41.20	+ 11.74	.....	+ 1.50	.....
	Ceres .....	.....	59.1	12.5	25.7	39.4	6 12.46	+ 0.71	.....	+ 1.50	13 6 14.67
	α Virginis .....	16.2	29.6	43.1	56.5	10.3	16 43.14	+ 0.84	1.33	+ 1.50	13 16 45.48
	Moon 1 Limb .....	9.0	23.0	36.8	50.8	5.1	38 36.94	+ 0.91	.....	+ 1.50	13 38 39.35
	η Bootis .....	33.5	47.5	1.6	15.5	29.5	47 1.52	+ 0.63	1.42	+ 1.50	13 47 3.65
April 29	Mars 1 Limb .....	.....	57.7	.....	25.0	.....	54 11.35	+ 0.91	.....	+ 1.55	10 54 13.81
	Mars 2 Limb .....	45.3	.....	12.3	.....	39.4	54 12.33	+ 0.91	.....	+ 1.55	10 54 14.79
	δ Leonis .....	3.4	17.6	31.9	46.1	0.5	5 31.90	+ 0.82	+ 1.62	+ 1.55	11 5 34.27
	δ Hydræ & Crateris ...	49.5	3.2	16.6	30.6	44.3	11 16.84	+ 1.10	1.43	+ 1.55	11 11 19.49
	Jupiter 1 Limb .....	.....	.....	59.0	.....	25.4	41 58.90	+ 1.00	.....	+ 1.55	12 42 1.45
	Jupiter 2 Limb .....	.....	.....	.....	14.9	.....	42 1.61	+ 1.00	.....	+ 1.55	12 42 4.16
	12 Canum Venat. ....	55.6	12.7	29.8	46.8	4.0	48 29.78	+ 0.66	1.64	+ 1.56	12 48 32.00
	α Ursæ Minoris S. P. ....	18.0	.....	.....	49.5	8.0	0 41.30	+ 12.32	.....	+ 1.56	.....
	Ceres .....	20.7	33.8	47.5	0.8	14.3	4 47.42	+ 0.91	.....	+ 1.56	13 4 49.89
	ε Bootis .....	27.3	42.5	57.7	12.8	27.8	37 57.62	+ 0.77	1.51	+ 1.58	14 37 59.97
April 30	Jupiter 1 Limb .....	.....	23.0	.....	49.7	.....	41 36.35	+ 0.75	.....	+ 1.89	12 41 38.99
	Jupiter 2 Limb .....	.....	.....	39.3	.....	6.1	41 39.40	+ 0.75	.....	+ 1.89	12 41 42.04
	12 Canum Venat. ....	55.4	12.4	29.6	46.7	3.8	48 29.58	+ 0.43	+ 2.06	+ 1.90	12 48 31.91
	Pallas .....	59.3	13.6	27.7	42.0	56.4	52 27.80	+ 0.58	.....	+ 1.90	12 52 30.28
	α Ursæ Minoris S. P. ....	.....	.....	41.5	54.5	.....	0 42.30	+ 10.96	.....	+ 1.90	.....
	Ceres .....	39.6	53.0	6.5	19.9	33.4	4 6.48	+ 0.67	.....	+ 1.90	13 4 9.05
	α Virginis .....	15.4	29.0	42.5	56.1	9.5	16 42.50	+ 0.80	2.02	+ 1.90	13 16 45.20
	η Bootis .....	33.0	47.2	1.3	15.2	29.3	47 1.20	+ 0.59	1.80	+ 1.91	13 47 3.70
May 1	α Coronæ borealis .....	22.7	37.6	52.5	7.5	22.5	27 52.56	+ 0.54	1.75	+ 1.92	15 27 55.02
	Sun 1 Limb .....	.....	.....	47.6	.....	.....	30 47.59	+ 0.65	.....	+ 2.01	2 30 50.25

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
May 1	Sun 2 Limb.....	31.6	.....	.....	.....	.....	32	59.16	+ 0.65	.....	+ 2.01	2 33 1.82
	Mars 1 Limb.....	.....	.....	46.5	.....	13.7	54	46.64	+ 0.69	.....	+ 2.08	10 54 49.41
	Mars 2 Limb.....	.....	.....	.....	0.8	.....	54	47.34	+ 0.69	.....	+ 2.08	10 54 50.11
	δ Leonis.....	3.4	17.5	31.6	45.8	0.1	5	31.68	+ 0.60	+ 2.04	+ 2.08	11 5 34.36
	β Leonis.....	22.2	35.9	.....	3.8	17.7	40	49.90	+ 0.64	2.11	+ 2.08	11 40 52.62
May 2	Sun 1 Limb.....	.....	22.4	36.2	49.8	3.7	34	36.12	+ 0.65	.....	+ 2.34	2 34 39.11
	Sun 2 Limb.....	20.2	34.2	48.1	1.7	15.6	36	47.96	+ 0.65	.....	+ 2.34	2 36 50.95
	ε Hydræ.....	46.0	59.4	12.6	26.0	39.4	38	12.68	+ 0.72	+ 2.36	+ 2.44	8 38 15.84
	α Hydræ.....	11.5	24.8	38.4	51.7	5.5	19	38.38	+ 0.82	2.39	+ 2.45	9 19 41.65
	ε Leonis.....	11.4	26.0	40.6	55.3	9.8	36	40.62	+ 0.58	2.46	+ 2.46	9 36 43.66
	α Leonis.....	18.6	32.4	45.8	59.4	13.3	59	45.90	+ 0.67	2.47	+ 2.46	9 59 49.03
	Mars 1 Limb.....	.....	54.8	.....	21.7	.....	55	8.25	+ 0.70	.....	+ 2.47	10 55 11.42
	Mars 2 Limb.....	42.1	.....	8.8	.....	35.5	55	8.80	+ 0.70	.....	+ 2.47	10 55 11.97
	δ Leonis.....	2.5	16.8	31.1	45.4	59.6	5	31.08	+ 0.61	2.62	+ 2.47	11 5 34.16
	Jupiter 1 Limb.....	26.4	.....	53.1	.....	19.5	40	53.00	+ 0.78	.....	+ 2.47	12 40 56.25
	Jupiter 2 Limb.....	.....	42.8	.....	9.2	.....	40	56.00	+ 0.78	.....	+ 2.47	12 40 59.25
	Pallas.....	7.1	21.4	35.7	49.9	4.3	51	35.68	+ 0.61	.....	+ 2.48	12 51 38.77
	α Ursæ Minoris S. P.	19.0	.....	39.5	55.0	9.0	0	42.80	+ 10.98	.....	+ 2.48	.....
	Ceres.....	21.1	34.5	47.8	1.4	14.6	2	47.88	+ 0.70	.....	+ 2.48	13 2 51.06
May 3	ε Leonis.....	11.4	25.7	40.5	55.1	9.7	36	40.48	+ 0.58	+ 2.58	+ 2.58	.....
May 6	Mars 1 Limb.....	31.0	.....	57.8	.....	24.6	56	57.80	+ 0.64	.....	+ 2.98	10 57 1.42
	Mars 2 Limb.....	.....	45.0	.....	11.8	.....	58	58.40	+ 0.64	.....	+ 2.98	10 57 2.02
	δ Leonis.....	2.0	16.4	30.6	44.8	59.3	5	30.62	+ 0.57	+ 3.07	+ 2.98	11 5 34.17
	δ Hydræ & Crateris...	48.2	1.7	15.4	39.4	52.8	11	15.50	+ 0.78	3.03	+ 2.98	11 11 19.26
	79 Leonis.....	.....	31.3	44.6	58.0	.....	15	44.63	+ 0.68	.....	+ 2.98	11 15 48.29
	.....	17.5	.....	.....	.....	10.5	.....	44.00	+ 0.68	.....	.....	.....†
	β Leonis.....	21.6	35.6	49.4	3.2	16.8	40	49.32	+ 0.60	2.69	+ 2.99	11 40 52.91
	Jupiter 1 Limb.....	5.1	.....	31.7	.....	58.4	39	31.73	+ 0.71	.....	+ 3.00	12 39 35.44
	Jupiter 2 Limb.....	.....	21.1	.....	47.8	.....	39	34.45	+ 0.71	.....	+ 3.00	12 39 38.16
	Pallas.....	37.5	51.8	6.4	20.7	35.2	50	6.32	+ 0.57	.....	+ 3.00	12 50 9.89
	Ceres.....	57.4	10.7	24.2	37.6	51.0	0	24.18	+ 0.64	.....	+ 3.00	13 0 27.82
	α Ursæ Minoris S. P.	22.5	37.0	.....	58.0	.....	0	46.77	+ 8.32	.....	+ 3.00	.....
	α Virginis.....	14.5	28.0	41.5	55.1	8.6	16	41.54	+ 0.75	3.03	+ 3.01	13 16 45.30
	η Bootis.....	31.7	46.0	59.9	13.8	28.1	46	59.90	+ 0.58	3.12	+ 3.01	13 47 3.49
May 7	Moon 2 Limb.....	25.7	40.4	54.5	8.8	23.1	49	54.50	+ 0.88	.....	+ 3.14	21 49 58.52
	α Ursæ Minoris.....	40.0	50.5	2.5	16.0	26.0	1	3.00	- 7.89	.....	+ 3.19	1 0 58.30
	Sun 1 Limb.....	19.6	33.7	47.6	1.6	15.4	53	47.58	+ 0.64	.....	+ 3.22	2 53 51.44
	Sun 2 Limb.....	32.5	46.6	0.5	14.4	28.2	56	0.44	+ 0.64	.....	+ 3.22	2 56 4.30
	α Tauri.....	9.5	23.6	37.6	51.4	5.1	26	37.44	+ 0.64	+ 3.14	+ 3.24	4 26 41.32
	α Aurigæ.....	6.4	25.4	44.4	3.5	22.6	4	44.46	+ 0.42	3.30	+ 3.25	5 4 48.13
	Venus 1 Limb.....	26.7	41.1	55.9	10.5	25.2	13	55.88	+ 0.59	.....	+ 3.25	5 13 59.72
	β Tauri.....	33.3	48.3	3.3	18.5	33.6	16	3.40	+ 0.57	3.19	+ 3.25	5 16 7.22
	α Orionis.....	56.5	10.1	23.6	36.8	50.4	46	23.48	+ 0.70	3.37	+ 3.26	5 46 27.44
	Mars 1 Limb.....	.....	17.4	.....	44.2	.....	57	30.80	+ 0.69	.....	+ 3.32	10 57 34.81
	Mars 2 Limb.....	4.5	.....	31.4	.....	58.4	57	31.43	+ 0.69	.....	+ 3.32	10 57 35.44
	δ Leonis.....	1.6	16.0	30.4	44.7	58.8	5	30.30	+ 0.61	3.34	+ 3.32	11 5 34.23
	79 Leonis.....	17.7	.....	.....	.....	11.0	15	44.35	+ 0.73	.....	+ 3.32	11 15 48.40
	.....	.....	30.5	44.0	57.2	.....	.....	43.90	+ 0.73	.....	.....	.....†
	Jupiter 1 Limb.....	.....	59.3	.....	25.8	.....	39	12.55	+ 0.76	.....	+ 3.34	12 39 16.65
	Jupiter 2 Limb.....	48.7	.....	15.4	.....	41.9	39	15.33	+ 0.76	.....	+ 3.34	12 39 19.43
	Pallas.....	18.7	32.9	47.2	1.6	15.7	49	47.22	+ 0.61	.....	+ 3.34	12 49 51.17
	Ceres.....	24.5	37.7	51.2	4.5	18.1	59	51.20	+ 0.69	.....	+ 3.34	12 59 55.23
	α Ursæ Minoris S. P.	22.5	34.0	.....	59.0	9.0	0	46.08	+ 9.11	.....	+ 3.34	13 0 58.53



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
May 9	$\alpha$ Leonis .....	17.2	30.6	44.2	57.8	11.6	59 44.28	+ 0.76	+ 3.91	+ 3.81	9 59 48.85
	Mars 1 Limb .....	16.5	.....	43.2	.....	10.1	58 43.27	+ 0.79	.....	+ 3.82	10 58 47.88
	Mars 2 Limb .....	.....	30.6	.....	57.4	.....	58 44.00	+ 0.79	.....	+ 3.82	10 58 48.61
	$\delta$ Leonis .....	0.8	15.4	29.7	43.8	58.1	5 29.56	+ 0.70	3.97	+ 3.83	11 5 34.09
	$\delta$ Hydræ & Crateris...	47.4	0.8	14.5	28.2	41.8	11 14.54	+ 0.96	3.78	+ 3.83	11 11 19.33
	A. S. C. 1367 .....	12.0	.....	.....	.....	5.2	35 38.60	+ 0.89	.....	.....	.....†
	.....	.....	25.4	38.7	52.3	.....	38.80	+ 0.89	.....	+ 3.83	11 35 43.52
	$\beta$ Leonis .....	20.4	34.2	48.1	1.7	15.5	40 47.98	+ 0.74	3.87	+ 3.83	11 40 52.55
	Jupiter 1 Limb .....	9.1	.....	35.8	.....	2.4	38 35.77	+ 0.87	.....	+ 3.85	12 38 40.49
	Jupiter 2 Limb .....	.....	25.3	.....	51.8	.....	38 38.55	+ 0.87	.....	+ 3.85	12 38 43.27
	Ceres .....	22.5	35.7	49.2	2.6	15.8	58 49.16	+ 0.79	.....	+ 3.86	12 58 53.81
	$\alpha$ Ursæ Minoris S. P.	21.0	35.0	44.5	56.0	9.0	0 45.10	+ 11.07	.....	+ 3.86	.....
	$\eta$ Bootis .....	31.2	45.3	59.2	13.3	27.4	46 59.28	+ 0.71	3.62	+ 3.87	13 47 3.86
	$\alpha$ Ursæ Minoris .....	.....	.....	.....	.....	24.0	1 1.00	- 7.84	.....	+ 4.07	1 0 57.23
May 10	Sun 1 Limb .....	57.1	.....	.....	.....	52.8	5 24.95	+ 0.68	.....	+ 4.11	3 5 29.74
	Sun 2 Limb .....	.....	24.2	38.2	52.2	6.3	7 38.24	+ 0.68	.....	+ 4.11	3 7 43.03
	$\alpha$ Tauri .....	8.8	22.6	36.4	50.1	4.1	26 36.40	+ 0.69	+ 4.14	+ 4.13	4 26 41.22
	$\alpha$ Aurigæ .....	5.3	24.2	43.5	2.5	21.6	4 43.42	+ 0.47	4.27	+ 4.14	5 4 48.03
	$\beta$ Tauri .....	32.2	47.4	2.4	17.6	32.7	16 2.46	+ 0.62	4.07	+ 4.15	5 16 7.23
	Venus 1 Limb .....	5.0	19.8	34.6	49.1	3.8	29 34.46	+ 0.63	.....	+ 4.15	5 29 39.46
	$\alpha$ Orionis .....	55.9	9.4	22.7	36.1	49.5	46 22.72	+ 0.75	4.07	+ 4.16	5 46 27.63
	$\beta$ Leonis .....	20.1	33.7	47.6	1.4	15.2	40 47.60	+ 0.70	4.28	+ 4.18	11 40 52.48
	A. S. C. 1393 .....	15.8	.....	.....	.....	9.0	57 42.40	+ 0.80	.....	+ 4.18	11 57 47.38
	.....	.....	28.5	42.0	55.2	.....	41.90	+ 0.80	.....	.....	.....†
	Jupiter 1 Limb .....	.....	4.8	.....	31.4	.....	38 18.10	+ 0.80	.....	+ 4.18	12 38 23.08
	Jupiter 2 Limb .....	54.6	.....	21.0	.....	47.8	38 21.13	+ 0.80	.....	+ 4.18	12 38 26.11
	Pallas .....	29.4	43.7	58.0	12.2	26.6	48 57.98	+ 0.66	.....	+ 4.18	12 49 2.82
	Ceres .....	53.4	6.7	20.2	33.7	47.1	58 20.22	+ 0.74	.....	+ 5.18	12 58 25.14
	$\alpha$ Ursæ Minoris S. P.	21.0	33.5	45.5	54.5	5.0	0 43.90	+ 9.16	.....	+ 4.18	13 0 57.24
May 11	Sun 1 Limb .....	50.8	4.9	18.8	32.9	46.8	9 18.84	+ 0.84	.....	+ 4.19	3 9 23.87
	Sun 2 Limb .....	4.4	18.2	32.2	46.2	0.2	11 32.24	+ 0.84	.....	+ 4.19	3 11 37.27
	Venus 1 Limb .....	18.5	33.4	48.0	2.6	17.4	34 47.98	+ 0.77	.....	+ 4.19	5 34 52.94
	Mars 1 Limb .....	.....	51.1	.....	17.8	.....	0 4.45	+ 0.92	.....	+ 4.20	11 0 9.57
	Mars 2 Limb .....	38.8	.....	5.4	.....	32.0	0 5.40	+ 0.92	.....	+ 4.20	11 0 10.52
	$\delta$ Leonis .....	0.5	14.8	29.1	43.4	57.6	5 29.03	+ 0.81	+ 4.32	+ 4.20	11 5 34.09
	$\delta$ Hydræ & Crateris...	46.7	0.3	13.8	27.5	41.4	11 13.94	+ 1.14	4.18	+ 4.20	11 11 19.28
	$\beta$ Leonis .....	19.8	33.6	47.5	1.2	15.0	40 47.42	+ 0.86	4.29	+ 4.20	11 40 52.48
	A. S. C. 1432 .....	6.0	.....	.....	.....	59.1	19 32.55	+ 1.04	.....	.....	.....†
	.....	.....	19.8	33.0	46.3	.....	33.03	+ 1.04	.....	+ 4.20	12 19 38.27
	Jupiter 1 Limb .....	34.5	.....	1.2	.....	27.2	38 0.97	+ 1.02	.....	+ 4.20	12 38 6.19
	Jupiter 2 Limb .....	.....	50.8	.....	17.3	.....	38 4.05	+ 1.02	.....	+ 4.20	12 38 9.27
	Pallas .....	15.6	29.8	44.2	58.6	13.0	48 44.24	+ 0.80	.....	+ 4.21	12 48 49.25
	Ceres .....	25.7	39.2	52.6	5.8	19.3	57 52.52	+ 0.93	.....	+ 4.21	12 57 57.66
	$\alpha$ Ursæ Minoris S. P.	19.0	28.5	43.0	53.5	2.0	0 41.20	+ 15.28	.....	+ 4.21	.....
May 13	$\eta$ Bootis .....	30.5	44.6	58.7	12.8	26.8	46 58.68	+ 0.83	4.10	+ 4.22	13 47 3.73
	$\alpha$ Bootis .....	48.6	2.7	16.7	30.9	45.0	8 16.78	+ 0.82	4.11	+ 4.23	14 8 21.83
	$\alpha$ Leonis .....	15.9	29.6	43.1	56.8	10.4	59 43.16	+ 0.72	+ 5.03	+ 4.92	9 59 48.80
	Mars 1 Limb .....	7.1	.....	34.0	.....	0.8	1 33.97	+ 0.76	.....	+ 4.93	11 1 39.66
	Mars 2 Limb .....	.....	21.2	.....	48.2	.....	1 34.70	+ 0.76	.....	+ 4.93	11 1 40.39
	$\delta$ Leonis .....	59.9	14.3	28.6	42.8	57.1	5 28.54	+ 0.66	4.99	+ 4.93	11 5 34.13
	$\delta$ Hydræ & Crateris ..	46.0	59.7	13.4	27.0	40.7	11 13.36	+ 0.94	4.94	+ 4.94	11 11 19.24
	Jupiter 1 Limb .....	.....	15.6	.....	42.2	.....	37 28.90	+ 0.83	.....	+ 4.95	12 37 34.68
	Jupiter 2 Limb .....	5.2	.....	.....	.....	58.5	37 31.85	+ 0.83	.....	+ 4.95	12 37 37.63
	Pallas .....	52.2	6.5	21.1	35.5	49.8	48 21.02	+ 0.65	.....	+ 4.95	12 48 26.62

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
May 13	Ceres.....	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>m.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>h.</i>	<i>m.</i>	<i>s.</i>
	$\alpha$ Ursæ Minoris S. P.	21.5	34.5	44.0	55.5	8.0	0	44.70	+ 0.76	.....	+ 4.95	12	57	6.91
	$\eta$ Bootis.....	29.8	44.0	58.1	12.2	26.2	46	58.06	+ 12.15	.....	+ 4.95	.....	.....	.....
	$\alpha$ Bootis.....	47.9	2.1	16.1	30.2	44.4	8	16.14	+ 0.67	+ 4.88	+ 4.96	13	47	3.69
	Groomb. 642 S. P. ....	33.5	50.5	6.5	23.0	39.0	14	6.50	+ 0.67	4.90	+ 4.96	14	8	21.77
	Groombridge 2283 ...	29.5	21.5	.....	4.0	54.5	33	12.40	+ 5.26	.....	+ 4.96	15	14	16.72
	Groomb. 750 S. P. ....	28.0	.....	40.0	16.0	52.0	47	39.95	- 7.51	.....	+ 4.96	15	33	9.85
	Saturn 1 Limb Ring	17.0	.....	45.1	.....	13.2	26	45.10	+ 4.32	.....	+ 4.96	15	47	49.23
	Saturn 2 Limb Ring	.....	33.9	.....	2.2	.....	26	48.05	+ 0.99	.....	+ 4.96	16	26	51.05
May 14	$\alpha$ Aurigæ.....	4.6	23.7	42.7	1.8	20.8	4	42.72	+ 0.99	.....	+ 4.96	16	26	54.00
	$\alpha$ Leonis.....	15.8	29.4	43.0	56.7	10.3	59	43.04	+ 0.42	+ 5.03	+ 5.00	5	4	48.14
	$\alpha$ Bootis.....	47.8	1.8	16.1	30.2	44.5	8	16.08	+ 0.75	5.11	+ 5.02	9	59	48.81
	$\epsilon$ Bootis.....	24.4	39.4	54.4	9.5	24.4	37	54.42	+ 0.69	4.94	+ 5.00	14	8	21.77
	$\alpha^2$ Libræ.....	27.8	41.6	55.3	9.2	22.8	41	55.34	+ 0.63	4.94	+ 5.00	14	38	0.05
	Groomb. 642 S. P. ....	34.0	50.5	6.5	24.5	40.0	14	7.10	+ 1.00	5.09	+ 5.00	14	42	1.34
	Groombridge 2283 ...	30.0	21.0	12.0	4.5	55.0	33	12.50	+ 5.89	.....	+ 4.99	15	14	17.98
	Groomb. 750 S. P. ....	27.5	.....	39.5	16.0	53.0	47	39.95	- 8.53	.....	+ 4.99	15	33	8.96
	Saturn 1 Limb Ring	.....	13.2	.....	41.4	.....	26	27.30	+ 4.83	.....	+ 4.99	15	47	49.77
May 16	Saturn 2 Limb Ring	2.0	.....	30.2	.....	58.3	26	30.17	+ 1.05	.....	+ 4.98	16	26	33.33
	Mars 1 Limb.....	37.4	.....	4.2	.....	31.0	4	4.20	+ 1.05	.....	+ 4.98	16	26	36.20
	Mars 2 Limb.....	.....	51.6	.....	18.3	.....	4	4.95	+ 0.83	.....	+ 4.65	11	4	9.68
	$\delta$ Hydræ & Crateris...	46.1	59.8	13.5	27.1	40.8	11	13.46	+ 0.83	.....	+ 4.65	11	4	10.43
	$\beta$ Leonis.....	19.5	33.3	47.0	0.8	14.5	40	47.02	+ 1.03	+ 4.72	+ 4.65	11	11	19.14
	Jupiter 1 Limb.....	20.0	.....	46.1	.....	12.9	36	46.33	+ 0.76	4.75	+ 4.64	11	40	52.42
	Jupiter 2 Limb.....	.....	35.7	.....	2.5	.....	36	49.10	+ 0.92	.....	+ 4.64	12	36	51.89
	Pallas.....	29.2	43.6	57.9	12.2	26.6	47	57.90	+ 0.92	.....	+ 4.64	12	36	54.66
	Groomb. 195 S. P. ....	21.5	.....	10.0	34.5	0.0	50	10.28	+ 0.69	.....	+ 4.63	12	48	3.22
	Ceres.....	29.0	42.5	55.8	9.2	22.6	55	55.82	+ 6.62	.....	+ 4.63	12	50	21.53
	$\alpha$ Ursæ Minoris S. P.	21.0	33.0	44.5	54.5	7.5	0	44.10	+ 0.83	.....	+ 4.63	12	56	1.28
	A. S. C. 1614.....	37.5	.....	.....	.....	30.7	4	4.10	+ 14.81	.....	+ 4.63	.....	.....	.....
	.....	.....	50.0	3.3	17.0	.....	.....	3.43	+ 0.87	.....	+ 4.64	14	4	9.61
	$\alpha$ Bootis.....	48.2	2.2	16.3	30.5	44.7	8	16.38	+ 0.87	.....	.....	.....	.....	.....
	$\epsilon$ Bootis.....	24.6	39.7	54.8	9.8	24.8	37	54.74	+ 0.72	4.61	+ 4.64	14	8	21.74
	$\alpha^2$ Libræ.....	28.4	42.1	55.9	9.7	23.5	41	55.92	+ 0.65	4.60	+ 4.64	14	38	0.03
	Groomb. 642 S. P. ....	33.5	50.0	6.0	23.0	39.0	14	6.30	+ 0.65	4.60	+ 4.64	14	38	0.03
	Groombridge 2283 ...	31.0	22.0	15.0	5.5	.....	33	13.98	+ 1.04	4.49	+ 4.64	14	42	1.60
	Groomb. 750 S. P. ....	27.0	3.5	39.0	15.0	52.0	47	39.30	+ 6.37	.....	+ 4.65	15	14	17.32
	Saturn 1 Limb Ring	23.8	.....	52.0	.....	20.3	25	52.03	- 9.28	.....	+ 4.65	15	33	9.35
	Saturn 2 Limb Ring	.....	40.9	.....	9.1	.....	25	55.00	+ 5.22	.....	+ 4.65	15	47	49.17
May 17	Sun 1 Limb.....	26.2	40.4	54.6	8.5	22.5	32	54.44	+ 1.10	.....	+ 4.66	16	25	57.79
	Sun 2 Limb.....	40.6	54.8	9.0	23.1	37.3	35	8.96	+ 1.10	.....	+ 4.66	16	26	0.76
May 20	Sun 1 Limb.....	20.8	35.1	49.3	3.6	17.8	44	49.32	+ 0.73	.....	+ 4.77	3	32	59.94
	Sun 2 Limb.....	35.9	50.0	4.1	18.2	32.5	47	4.14	+ 0.73	.....	+ 4.77	3	35	14.46
	$\alpha$ Orionis.....	54.6	7.8	21.4	34.7	48.1	46	21.32	.....	.....	.....	.....	.....	.....
	$\delta$ Leonis.....	59.2	13.6	27.8	42.2	56.5	5	27.86	+ 0.54	+ 5.56	+ 5.47	5	46	27.43
	Mars 1 Limb.....	.....	36.3	.....	3.1	.....	7	49.70	+ 0.53	5.72	+ 5.52	11	5	33.91
	Mars 2 Limb.....	23.4	.....	50.2	.....	17.0	7	50.20	+ 0.64	.....	+ 5.52	11	7	55.86
	Jupiter 1 Limb.....	.....	43.4	.....	10.1	.....	35	56.75	+ 0.64	.....	+ 5.52	11	7	56.36
	Jupiter 2 Limb.....	32.9	.....	59.5	.....	26.1	35	59.50	+ 0.69	.....	+ 5.56	12	36	3.00
	$\alpha$ Ursæ Minoris S. P.	29.0	39.0	50.5	0.5	9.5	0	49.70	+ 0.69	.....	+ 5.56	12	36	5.75
	$\eta$ Bootis.....	29.5	43.6	57.7	11.7	25.7	46	57.64	+ 10.53	.....	+ 5.57	.....	.....	.....
	$\alpha$ Bootis.....	47.4	1.6	15.7	29.8	43.9	8	15.68	+ 0.55	5.42	+ 5.60	13	47	3.79
	.....	.....	.....	.....	.....	.....	.....	.....	+ 0.54	5.50	+ 5.62	14	8	21.84



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpol- ated.	
May 20	♄ Bootis .....	24.0	39.0	54.1	9.1	24.0	37 54.04	+ 0.49	+ 5.47	+ 5.63	14 38 0.16
May 21	INSTRUMENT REVERSED.										
	Mars 1 Limb .....	23.9	.....	50.6	.....	17.4	8 50.63	+ 0.20	.....	+ 6.41	11 8 57.24
	Mars 2 Limb .....	.....	37.8	.....	4.6	.....	8 51.20	+ 0.20	.....	+ 6.41	11 8 57.81
	Moon 1 Limb .....	36.6	50.2	3.8	17.4	31.1	13 3.82	+ 0.22	.....	+ 6.42	11 13 10.46
	η Bootis .....	28.8	42.8	57.0	11.0	25.1	46 56.94	+ 0.14	+ 6.53	+ 6.51	13 47 3.59
	α Bootis .....	46.7	1.0	15.0	29.2	43.5	8 15.08	+ 0.14	6.50	+ 6.53	14 8 21.75
	α Coronæ borealis ...	18.5	33.2	48.5	3.2	18.3	27 48.34	+ 0.09	6.62	+ 6.55	15 27 54.98
	α Serpentis .....	49.6	3.0	16.4	29.6	43.1	36 16.34	+ 0.20	6.55	+ 6.55	15 36 23.09
May 22	Mars 1 Limb .....	.....	.....	52.8	.....	19.7	9 52.88	+ 0.22	.....	+ 6.64	11 9 59.74
	Mars 2 Limb .....	.....	.....	.....	6.7	.....	9 53.31	+ 0.22	.....	+ 6.64	11 10 0.17
	Moon 1 Limb .....	58.6	12.2	25.7	39.2	52.8	56 25.70	+ 0.28	.....	+ 6.64	11 56 32.62
	η Virginis .....	9.0	22.2	35.5	48.7	2.1	11 35.50	+ 0.26	.....	+ 6.64	12 11 42.40
	21 Virginis .....	56.7	10.3	23.7	37.1	50.6	25 23.68	+ 0.30	.....	+ 6.64	12 25 30.62
	Jupiter 1 Limb .....	9.4	.....	35.8	.....	2.4	35 35.87	+ 0.28	.....	+ 6.64	12 35 42.79
	Jupiter 2 Limb .....	.....	25.5	.....	51.9	.....	35 38.70	+ 0.28	.....	+ 6.64	12 35 45.62
	Pallas .....	19.2	33.7	48.1	2.6	16.8	47 48.08	+ 0.14	.....	+ 6.64	12 47 54.86
	Groomb. 195 S. P. ...	22.0	.....	12.0	.....	2.0	50 11.93	+ 6.89	.....	+ 6.64	12 50 25.46
	Ceres .....	55.7	9.0	22.4	35.8	49.0	54 22.38	+ 0.23	.....	+ 6.64	12 54 29.25
	α Ursæ Minoris S. P. ...	22.5	33.5	44.5	55.5	.....	0 44.62	+ 15.94	.....	+ 6.65	.....
	α Virginis .....	11.5	24.9	38.5	52.2	5.2	16 38.46	+ 0.31	+ 6.54	+ 6.65	13 16 45.42
	η Bootis .....	28.7	42.6	56.8	10.8	25.0	46 56.78	+ 0.16	6.67	+ 6.65	13 47 3.59
	α Bootis .....	46.6	0.8	14.8	29.0	43.2	8 14.88	+ 0.16	6.68	+ 6.65	14 8 21.69
	♄ Bootis .....	23.3	38.2	53.4	8.4	23.3	37 53.32	+ 0.11	6.57	+ 6.65	14 38 0.08
	α <sup>2</sup> Libræ .....	26.7	40.6	54.4	8.2	22.0	41 54.38	+ 0.33	6.77	+ 6.65	14 42 1.36
	Groomb. 642 S. P. ...	36.0	52.5	9.0	25.0	41.5	14 8.80	+ 6.61	.....	+ 6.66	15 14 22.07
	Groombridge 2283 ...	24.5	15.5	6.0	57.0	49.5	33 6.50	- 10.69	.....	+ 6.66	15 33 2.47
	Groomb. 750 S. P. ...	29.0	.....	41.0	17.0	53.0	47 40.95	+ 5.34	.....	+ 6.66	15 47 52.95
	Saturn 1 Limb Ring ..	33.1	.....	1.5	.....	29.8	24 1.47	+ 0.34	.....	+ 6.66	16 24 8.47
	Saturn 2 Limb Ring ..	.....	50.2	.....	18.5	.....	24 4.35	+ 0.34	.....	+ 6.66	16 24 11.35
	Mercury 2 Limb .....	.....	29.3	42.5	56.1	9.6	22 42.61	+ 0.24	.....	+ 6.71	2 22 49.56
May 23	♄ Leonis .....	58.7	13.0	27.2	41.5	55.8	5 27.24	+ 0.17	+ 6.67	+ 6.76	11 5 34.17
	Mars 1 Limb .....	.....	43.2	.....	10.0	.....	10 56.60	+ 0.26	.....	+ 6.76	11 11 3.62
	Mars 2 Limb .....	30.5	.....	57.3	.....	23.8	10 57.20	+ 0.26	.....	+ 6.76	11 11 4.22
	β Leonis .....	18.1	31.8	45.6	59.5	13.3	40 45.66	+ 0.21	6.59	+ 6.76	11 40 52.63
	η Virginis .....	8.6	21.8	35.2	48.4	1.7	11 35.14	+ 0.29	.....	+ 6.77	12 11 42.20
	21 Virginis .....	56.6	10.0	23.6	36.8	50.4	25 23.48	+ 0.34	.....	+ 6.77	12 25 30.59
	Jupiter 1 Limb .....	.....	13.1	.....	39.5	.....	35 26.30	+ 0.31	.....	+ 6.77	12 35 33.38
	Jupiter 2 Limb .....	2.4	.....	29.1	.....	55.6	35 29.03	+ 0.31	.....	+ 6.77	12 35 36.11
	Moon 1 Limb .....	58.5	12.2	25.3	39.3	53.1	39 25.72	+ 0.33	.....	+ 6.77	12 39 32.82
	Pallas .....	22.7	36.9	51.2	5.6	20.2	47 51.32	+ 0.17	.....	+ 6.77	12 47 58.26
	Groomb. 195 S. P. ...	22.0	.....	11.5	.....	3.0	50 12.10	+ 7.22	.....	+ 6.77	12 50 26.09
	Ceres .....	44.7	58.3	11.8	25.2	38.5	54 11.70	+ 0.26	.....	+ 6.77	12 54 18.73
	α Ursæ Minoris S. P. ...	21.5	31.5	.....	56.0	.....	0 43.93	+ 16.71	.....	+ 6.77	.....
	θ Virginis .....	5.6	18.8	32.2	45.6	58.8	1 32.20	+ 0.32	.....	+ 6.77	13 1 39.29
	α Virginis .....	11.1	24.5	38.0	51.5	5.1	16 38.04	+ 0.34	6.92	+ 6.77	13 16 45.15
	η Bootis .....	28.4	42.6	56.8	10.8	24.7	46 56.66	+ 0.19	6.75	+ 6.78	13 47 3.63
	α Bootis .....	46.3	0.5	14.6	28.8	42.9	8 14.62	+ 0.18	6.92	+ 6.78	14 8 21.58
May 24	Sun 1 Limb .....	21.7	35.8	50.2	4.4	.....	0 50.14	+ 0.16	.....	+ 6.86	4 0 57.16
	Sun 2 Limb .....	.....	51.3	.....	.....	.....	3 5.53	+ 0.16	.....	+ 6.86	4 3 12.55
	♄ Leonis .....	58.6	12.7	27.1	41.4	55.6	5 27.08	+ 0.16	+ 6.82	+ 6.90	11 5 34.14
	Mars 1 Limb .....	.....	49.0	.....	15.7	.....	12 2.35	+ 0.25	.....	+ 6.90	11 12 9.50

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
May 24	Mars 2 Limb .....	36.3	.....	2.8	.....	29.6	12	2.90	+ 0.25	.....	+ 6.90	11 12 10.05
	$\beta$ Leonis .....	18.0	31.7	45.6	59.3	13.2	40	45.56	+ 0.20	+ 6.69	+ 6.90	11 40 52.66
	Jupiter 1 Limb .....	50.8	.....	17.8	.....	44.3	35	17.63	+ 0.30	.....	+ 6.91	12 35 24.84
	Jupiter 2 Limb .....	.....	6.8	.....	33.6	.....	35	20.20	+ 0.30	.....	+ 6.91	12 35 27.41
	Pallas .....	27.2	41.7	56.1	10.5	24.8	47	56.06	+ 0.16	.....	+ 6.91	12 48 3.13
	Groomb. 195 S. P. ....	21.0	.....	11.5	.....	1.0	50	11.10	+ 7.21	.....	+ 6.91	12 50 25.22
	Ceres .....	36.3	49.6	2.7	16.4	29.7	54	2.94	+ 0.25	.....	+ 6.91	12 54 10.10
	$\alpha$ Ursæ Minoris S. P. .	22.0	34.0	.....	55.5	.....	0	44.73	+ 16.70	.....	+ 6.91	.....
	$\theta$ Virginis .....	5.5	18.8	32.1	45.5	58.7	1	32.12	+ 0.31	.....	+ 6.91	13 1 39.34
	$\alpha$ Virginis .....	10.8	24.5	37.8	51.4	5.0	16	37.90	+ 0.33	7.07	+ 6.91	13 16 45.14
	Moon 1 Limb .....	46.2	0.1	14.0	28.0	42.0	23	14.06	+ 0.35	.....	+ 6.91	13 23 21.32
	$\eta$ Bootis .....	28.4	42.4	56.6	10.6	24.5	46	56.50	+ 0.18	6.92	+ 6.91	13 47 3.59
	$\alpha$ Bootis .....	46.2	0.4	14.5	28.7	42.7	8	14.50	+ 0.17	7.04	+ 6.92	14 8 21.59
	Groomb. 642 S. P. ....	33.5	52.0	8.0	24.5	41.0	14	7.80	+ 6.93	.....	+ 6.92	15 14 21.65
	Groomb. 750 S. P. ....	28.5	3.5	40.0	16.5	53.0	47	40.30	+ 5.59	.....	+ 6.92	15 47 52.81
	Saturn 1 Limb Ring ..	.....	10.2	.....	38.3	.....	23	24.25	+ 0.37	.....	+ 6.92	16 23 31.54
	Saturn 2 Limb Ring ..	59.3	.....	27.3	.....	55.5	23	27.37	+ 0.37	.....	+ 6.92	16 23 34.66
May 25	Sun 1 Limb .....	23.1	37.5	51.5	5.9	20.1	4	51.62	+ 0.26	.....	+ 6.97	4 4 58.85
	Sun 2 Limb .....	38.6	53.0	7.2	21.6	35.7	7	7.22	+ 0.26	.....	+ 6.97	4 7 14.45
	Venus 1 Limb .....	10.2	24.8	39.4	54.1	9.0	47	39.50	+ 0.23	.....	+ 6.98	6 47 46.71
	$\alpha$ Canis Minoris .....	18.6	31.8	45.1	58.5	12.0	30	45.20	+ 0.38	+ 7.03	+ 6.99	7 30 52.57
	$\beta$ Geminorum .....	50.6	5.6	20.7	35.8	51.0	35	20.74	+ 0.20	6.99	+ 6.99	7 35 27.93
	$\alpha$ Leonis .....	14.3	28.0	41.7	55.2	8.7	59	41.58	+ 0.34	6.86	+ 7.00	9 59 48.92
	$\delta$ Leonis .....	58.4	12.6	26.8	41.1	55.4	5	26.86	+ 0.26	6.93	+ 7.00	11 5 34.12
	Mars 1 Limb .....	42.7	.....	9.5	.....	36.3	13	9.50	+ 0.37	.....	+ 7.00	11 13 16.87
	Mars 2 Limb .....	.....	56.6	.....	23.5	.....	13	10.05	+ 0.37	.....	+ 7.00	11 13 17.42
	$\beta$ Leonis .....	17.6	31.4	45.3	59.1	12.7	40	45.22	+ 0.31	6.91	+ 7.01	11 40 52.54
	Jupiter 1 Limb .....	.....	55.2	.....	21.5	.....	35	8.35	+ 0.44	.....	+ 7.02	12 35 15.81
	Jupiter 2 Limb .....	45.4	.....	11.8	.....	38.4	35	11.87	+ 0.44	.....	+ 7.02	12 35 19.33
	Pallas .....	33.2	47.6	2.0	16.5	30.7	48	2.00	+ 0.25	.....	+ 7.02	12 48 9.27
	Groomb. 195 S. P. ....	20.5	.....	10.0	.....	59.5	50	9.93	+ 8.89	.....	+ 7.02	12 50 25.84
	Ceres .....	28.4	41.8	55.2	8.6	21.8	53	55.16	+ 0.38	.....	+ 7.02	12 54 2.56
	$\alpha$ Ursæ Minoris S. P. .	20.5	29.5	41.0	52.0	4.0	0	41.40	+ 20.54	.....	+ 7.02	.....
	89 Virginis .....	34.7	48.6	2.5	16.4	30.4	41	2.52	+ 0.53	.....	+ 7.03	13 41 10.08
	$\eta$ Bootis .....	27.8	42.0	56.1	10.2	24.4	46	56.10	+ 0.28	7.21	+ 7.03	13 47 3.41
	Moon 1 Limb .....	24.2	38.9	53.2	7.3	21.6	8	53.04	+ 0.54	.....	+ 7.03	14 9 0.61
	$\alpha^2$ Libræ .....	26.6	40.0	53.7	7.6	21.5	41	53.88	+ 0.52	7.10	+ 7.03	14 42 1.43
May 26	Mercurey 2 Limb .....	1.7	15.2	28.6	42.2	55.7	37	28.68	+ 0.26	.....	+ 7.37	2 37 36.31
May 27	Sun 1 Limb .....	27.3	41.7	56.1	10.5	24.7	12	56.06	+ 0.18	.....	+ 7.38	4 13 3.62
	Sun 2 Limb .....	43.4	57.5	11.8	26.2	40.7	15	11.92	+ 0.18	.....	+ 7.38	4 15 19.48
	$\alpha$ Aurigæ .....	2.8	21.9	40.9	59.8	19.1	4	40.90	- 0.08	+ 7.41	+ 7.39	5 4 48.21
	$\beta$ Tauri .....	29.6	44.7	59.7	14.8	30.0	15	59.76	+ 0.13	7.31	+ 7.39	5 16 7.28
	$\alpha$ Orionis .....	53.0	6.5	20.1	33.3	46.7	46	19.92	+ 0.28	7.34	+ 7.39	5 46 27.59
	Venus 1 Limb .....	25.8	40.6	55.2	9.9	24.8	57	55.26	+ 0.16	.....	+ 7.40	6 58 2.82
	$\delta$ Leonis .....	58.0	12.4	26.6	40.8	55.1	5	26.58	+ 0.18	7.27	+ 7.44	11 5 34.20
	Mars 1 Limb .....	1.7	.....	28.4	.....	55.2	15	28.43	+ 0.28	.....	+ 7.44	11 15 36.15
	Mars 2 Limb .....	.....	15.6	.....	42.4	.....	15	29.00	+ 0.28	.....	+ 7.44	11 15 36.72
	$\epsilon$ Bootis .....	22.3	37.3	52.4	7.4	22.4	37	52.36	+ 0.14	7.50	+ 7.45	14 37 59.95
	$\chi$ Libræ .....	12.4	26.8	41.1	55.5	10.0	30	41.16	+ 0.45	.....	+ 7.46	15 30 49.07
	Groombridge 2283 .....	23.5	14.5	5.0	0.0	47.5	33	6.10	- 12.22	.....	+ 7.46	15 33 1.34
	1 Scorpii .....	43.7	58.6	13.2	27.7	42.7	41	13.18	+ 0.46	.....	+ 7.46	15 41 21.10
	Moon 1 Limb .....	.....	44.0	59.2	.....	29.2	49	59.09	+ 0.46	.....	+ 7.46	15 50 7.01
	$\sigma$ Scorpii .....	50.2	4.6	19.6	34.3	49.0	11	19.54	+ 0.46	.....	+ 7.46	16 11 27.46
	$\alpha$ Scorpii .....	57.9	12.7	27.6	42.4	57.2	19	27.56	+ 0.46	7.74	+ 7.46	16 19 35.48
	Saturn 1 Limb Ring ..	59.2	.....	27.7	.....	56.1	22	27.67	+ 0.42	.....	+ 7.46	16 22 35.55



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpolated.	
May 27	Saturn 2 Limb Ring.....	s. ....	s. 17.2	s. ....	s. 44.7	s. ....	m. 22	s. 30.95	+ 0.42	s. ....	+ 7.46	h. m. s. 16 22 38.83
	Mercury 2 Limb.....	13.7	27.2	40.5	54.2	7.7	41	40.66	+ 0.17	.....	+ 7.51	2 41 48.34
May 28	Sun 1 Limb.....	30.3	44.6	59.1	13.4	27.6	16	59.00	+ 0.12	.....	+ 7.52	4 17 6.64
	Sun 2 Limb.....	46.5	0.8	15.1	29.5	43.8	19	15.14	+ 0.12	.....	+ 7.52	4 19 22.78
	$\alpha$ Aurigæ.....	2.8	21.8	40.9	0.0	18.8	4	40.86	- 0.11	+ 7.49	+ 7.52	5 4 48.27
	Venus 1 Limb.....	.....	47.0	1.3	16.4	30.8	3	1.54	+ 0.10	.....	+ 7.53	7 3 9.17
	$\beta$ Geminorum.....	50.2	5.3	20.4	35.6	50.6	35	20.42	+ 0.07	7.42	+ 7.54	7 35 28.03
	$\delta$ Leonis.....	57.9	12.2	26.5	40.7	55.0	5	26.46	+ 0.12	7.44	+ 7.55	11 5 34.13
	Mars 1 Limb.....	.....	26.8	.....	53.6	.....	16	40.20	+ 0.20	.....	+ 7.55	11 16 47.95
	Mars 2 Limb.....	13.9	.....	40.6	.....	7.4	16	40.63	+ 0.20	.....	+ 7.55	11 16 48.38
	Jupiter 1 Limb.....	22.0	.....	48.7	.....	15.2	34	48.63	+ 0.25	.....	+ 7.56	12 34 56.44
	Jupiter 2 Limb.....	.....	38.1	.....	4.7	.....	34	51.40	+ 0.25	.....	+ 7.56	12 34 59.21
	$\alpha$ Ursæ Minoris S. P.	23.0	35.5	48.5	58.5	10.5	0	47.20	+ 15.91	.....	+ 7.56	.....
	$\eta$ Bootis.....	27.6	41.6	55.7	9.8	23.8	46	55.70	+ 0.13	7.75	+ 7.56	13 47 3.39
	$\alpha$ Bootis.....	45.6	59.8	14.0	28.1	42.2	8	13.94	+ 0.13	7.64	+ 7.56	14 8 21.63
May 29	Sun 1 Limb.....	33.7	48.1	2.5	16.8	31.2	21	2.46	+ 0.11	.....	+ 7.61	4 21 10.18
	Sun 2 Limb.....	50.0	4.3	18.7	33.1	47.6	23	18.74	+ 0.11	.....	+ 7.61	4 23 26.46
	$\alpha$ Aurigæ.....	2.6	21.7	40.8	59.8	18.8	4	40.74	- 0.10	+ 7.61	+ 7.62	5 4 48.26
	Venus 1 Limb.....	37.8	52.2	7.0	21.6	36.3	8	6.98	+ 0.10	.....	+ 7.62	7 8 14.70
	$\alpha$ Canis Minoris.....	18.0	31.4	44.7	58.0	11.5	30	44.72	+ 0.19	7.68	+ 7.62	7 30 52.53
	$\beta$ Geminorum.....	50.1	5.2	20.3	35.4	50.5	35	20.30	+ 0.07	7.53	+ 7.63	7 35 28.00
	$\delta$ Leonis.....	57.7	12.0	26.4	40.6	54.7	5	26.28	+ 0.11	7.61	+ 7.66	11 5 34.05
	Mars 1 Limb.....	26.5	.....	53.1	.....	19.8	17	53.13	+ 0.19	.....	+ 7.66	11 18 0.98
	Mars 2 Limb.....	.....	40.4	.....	7.0	.....	17	53.70	+ 0.19	.....	+ 7.66	11 18 1.55
	$\alpha$ Ursæ Minoris S. P.	28.0	37.0	49.0	59.0	11.5	0	48.90	+ 15.16	.....	+ 7.68	.....
	$\eta$ Bootis.....	27.7	41.7	55.7	9.7	23.8	46	55.72	+ 0.13	7.73	+ 7.69	13 47 3.54
	Mercury 2 Limb.....	.....	26.9	40.8	54.6	.....	50	40.77	+ 0.13	.....	+ 7.87	2 50 48.77
May 30	Sun 1 Limb.....	.....	51.7	6.1	20.5	35.1	25	6.18	+ 0.08	.....	+ 7.89	4 25 14.15
	Sun 2 Limb.....	53.7	8.2	22.6	36.8	51.3	27	22.52	+ 0.08	.....	+ 7.89	4 27 30.49
	$\alpha$ Aurigæ.....	2.2	21.3	40.5	59.6	8.7	4	40.46	- 0.11	+ 7.91	+ 7.90	5 4 48.25
	Venus 1 Limb.....	42.1	56.6	11.2	26.0	40.6	13	11.30	+ 0.07	.....	+ 7.93	7 13 19.30
	$\alpha$ Canis Minoris.....	17.8	31.1	44.5	57.8	11.2	30	44.48	+ 0.15	7.96	+ 7.93	7 30 52.56
	$\beta$ Geminorum.....	49.6	4.7	19.8	35.0	50.2	35	19.86	+ 0.05	8.00	+ 7.93	7 35 27.84
	$\delta$ Leonis.....	57.5	11.7	25.8	40.2	54.5	5	25.94	+ 0.09	7.96	+ 7.96	11 5 33.99
	Mars 1 Limb.....	40.8	54.3	7.6	20.9	34.2	19	7.56	+ 0.15	.....	+ 7.96	11 19 15.67
	Jupiter 1 Limb.....	.....	24.7	.....	51.2	.....	34	37.95	+ 0.19	.....	+ 7.97	12 34 46.11
	Jupiter 2 Limb.....	13.9	.....	40.6	.....	7.2	34	40.57	+ 0.19	.....	+ 7.97	12 34 48.73
	12 Canum Venat.....	49.7	6.7	23.8	41.1	58.3	48	23.92	- 0.03	7.90	+ 7.97	12 48 31.86
	$\alpha$ Ursæ Minoris S. P.	27.5	39.5	50.5	1.5	12.5	0	50.30	+ 14.01	.....	+ 7.97	.....
May 31	Venus 1 Limb.....	45.4	0.0	14.5	29.2	43.8	18	14.58	+ 0.15	.....	+ 8.05	7 18 22.78
	$\alpha$ Canis Minoris.....	17.7	30.8	.....	57.7	11.0	30	44.30	+ 0.26	+ 8.02	+ 8.05	7 30 52.61
	$\delta$ Leonis.....	57.2	11.4	25.7	40.0	54.2	5	25.70	+ 0.17	8.11	+ 8.07	11 5 33.94
	Jupiter 1 Limb.....	.....	.....	33.8	.....	0.2	34	33.72	+ 0.31	.....	+ 8.08	12 34 42.11
	Jupiter 2 Limb.....	.....	.....	.....	49.3	.....	34	36.00	+ 0.31	.....	+ 8.08	12 34 44.39
	12 Canum Venat.....	49.5	6.6	23.7	40.8	58.2	48	23.76	+ 0.02	8.00	+ 8.08	12 48 31.86
	$\alpha$ Ursæ Minoris S. P.	26.0	.....	.....	59.0	10.5	0	48.20	+ 16.71	.....	+ 8.09	.....
	$\eta$ Bootis.....	27.2	41.2	55.3	9.5	23.5	46	55.34	+ 0.19	8.04	+ 8.10	13 47 3.63
	$\alpha$ Bootis.....	45.0	59.2	13.3	27.6	41.6	8	13.34	+ 0.18	8.18	+ 8.10	14 8 21.62
June 1	Mercury 2 Limb.....	.....	15.4	28.8	42.5	56.3	0	28.88	+ 0.24	.....	+ 8.30	3 0 37.42
	Sun 1 Limb.....	46.3	1.0	15.5	29.9	44.1	33	15.36	+ 0.18	.....	+ 8.33	4 33 23.87
	Sun 2 Limb.....	3.1	17.5	31.8	46.3	0.6	35	31.86	+ 0.18	.....	+ 8.33	4 35 40.37
	$\alpha$ Aurigæ.....	1.7	20.8	40.0	59.1	18.2	4	39.96	- 0.06	+ 8.39	+ 8.33	5 4 48.23
	$\alpha$ Orionis.....	52.1	5.4	19.0	32.3	45.6	46	18.88	+ 0.27	8.41	+ 8.35	5 46 27.50

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
June 1	Venus 1 Limb.....	47.3	1.8	16.4	31.1	45.7	23 16.46	+ 0.17	.....	+ 8.37	7 23 25.00
	$\alpha$ Canis Minoris.....	17.2	30.5	43.8	57.3	10.6	30 43.88	+ 0.28	+ 8.42	+ 8.37	7 30 52.53
	$\beta$ Geminorum.....	49.4	4.4	19.5	34.5	49.7	35 19.50	+ 0.14	8.25	+ 8.37	7 35 28.01
	$\delta$ Leonis.....	57.0	11.2	25.4	39.7	53.8	5 25.42	+ 0.18	8.37	+ 8.40	11 5 34.00
	Mars 1 Limb.....	13.8	.....	40.4	.....	7.0	21 40.40	+ 0.28	.....	+ 8.40	11 21 49.08
	Mars 2 Limb.....	.....	27.4	.....	54.3	.....	21 40.85	+ 0.28	.....	+ 8.40	11 21 49.53
	Jupiter 1 Limb.....	.....	16.6	.....	43.1	.....	34 29.85	+ 0.33	.....	+ 8.41	12 34 38.59
	Jupiter 2 Limb.....	5.8	.....	32.3	.....	58.8	34 32.30	+ 0.33	.....	+ 8.41	12 34 41.04
	$\alpha$ Ursæ Minoris S. P.	25.5	37.5	48.5	59.5	11.0	0 48.40	+ 17.09	.....	+ 8.42	.....
June 3	Sun 1 Limb.....	.....	.....	.....	40.6	55.0	41 26.22	+ 0.23	.....	+ 8.76	4 41 35.21
	Sun 2 Limb.....	14.0	28.6	42.8	57.1	11.6	43 42.82	+ 0.23	.....	+ 8.76	4 43 51.81
	$\alpha$ Aurigæ.....	1.3	20.5	39.7	58.7	17.8	4 39.60	- 0.02	+ 8.74	+ 8.76	5 4 48.34
	$\alpha$ Orionis.....	51.8	5.1	18.5	31.9	45.3	46 18.52	+ 0.34	8.71	+ 8.77	5 46 27.63
	$\alpha$ Canis Minoris.....	16.8	30.1	43.5	56.8	10.1	30 43.46	+ 0.34	8.77	+ 8.78	7 30 52.58
	Venus 1 Limb.....	47.8	2.3	16.8	31.5	46.1	33 16.90	+ 0.23	.....	+ 8.78	7 33 25.91
	$\beta$ Geminorum.....	48.8	3.8	19.0	34.1	49.3	35 19.00	+ 0.19	8.69	+ 8.78	7 35 27.97
	Jupiter 1 Limb.....	57.9	.....	24.4	.....	51.0	34 24.43	+ 0.40	.....	+ 8.80	12 34 33.63
	Jupiter 2 Limb.....	.....	13.7	.....	40.2	.....	34 26.95	+ 0.40	.....	+ 8.80	12 34 36.15
	$\alpha$ Ursæ Minoris S. P.	26.0	37.0	48.5	59.0	9.5	0 48.00	+ 18.27	.....	+ 8.81	.....
	$\alpha$ Coronæ borealis.....	16.2	30.8	45.8	0.8	15.7	27 45.86	+ 0.19	9.04	+ 8.81	15 27 54.86
June 4	Sun 1 Limb.....	4.0	17.4	32.0	46.3	0.8	45 32.10	+ 0.23	.....	+ 8.86	4 45 41.19
	Sun 2 Limb.....	20.0	34.6	49.0	3.5	17.9	47 49.00	+ 0.23	.....	+ 8.86	4 47 58.09
	$\zeta$ Pegasi.....	51.2	4.7	18.3	31.8	45.3	33 18.26	+ 0.31	+ 8.84	+ 8.92	22 33 27.49
	$\alpha$ Pegasi.....	9.4	23.2	36.7	50.5	4.3	56 36.82	+ 0.28	8.86	+ 8.92	22 56 46.02
	$\phi$ Aquarii.....	24.4	37.7	51.0	4.4	17.7	5 51.04	+ 0.41	.....	+ 8.92	23 6 0.37
	Moon 2 Limb.....	22.1	35.6	49.4	3.0	16.7	15 49.36	+ 0.42	.....	+ 8.92	23 15 58.70
	$\iota$ Piscium.....	5.7	19.0	32.2	45.4	58.8	31 32.22	+ 0.34	8.94	+ 8.92	23 31 41.48
	$\alpha$ Andromedæ.....	26.1	41.3	56.4	11.4	26.5	59 56.34	+ 0.17	8.88	+ 8.93	0 0 5.44
	$\gamma$ Pegasi.....	21.5	34.8	48.6	2.5	16.2	4 48.72	+ 0.28	9.00	+ 8.93	0 4 57.93
	$\alpha$ Ursæ Minoris.....	.....	14.5	25.0	.....	.....	1 25.35	- 17.93	.....	+ 8.93	1 1 16.35
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June 5	Sun 1 Limb.....	9.6	24.2	38.7	53.1	7.7	49 38.66	+ 0.22	.....	+ 8.95	4 49 47.83
	Sun 2 Limb.....	26.8	41.2	55.6	10.1	24.6	51 55.66	+ 0.22	.....	+ 8.95	4 52 4.83
	$\alpha$ Aurigæ.....	1.2	20.4	39.5	58.5	17.5	4 39.42	- 0.05	8.98	+ 8.95	5 4 48.32
	$\alpha$ Canis Minoris.....	16.6	29.8	43.3	56.6	10.0	30 43.26	+ 0.33	8.98	+ 8.98	7 30 52.57
	$\beta$ Geminorum.....	48.6	3.8	18.8	33.9	49.0	35 18.82	+ 0.17	8.89	+ 8.98	7 35 27.97
	Venus 1 Limb.....	42.9	57.4	12.1	26.7	41.3	43 12.08	+ 0.21	.....	+ 8.99	7 43 21.28
	Mars 1 Limb.....	35.3	48.7	2.1	15.4	28.7	27 2.04	+ 0.34	.....	+ 9.03	11 27 11.41
	$\beta$ Leonis.....	15.6	29.4	43.0	56.8	10.6	40 43.08	+ 0.27	8.99	+ 9.04	11 40 52.39
	Jupiter 1 Limb.....	55.2	.....	21.7	.....	48.3	34 21.73	+ 0.39	.....	+ 9.05	12 34 31.17
	Jupiter 2 Limb.....	.....	11.0	.....	37.6	.....	34 24.30	+ 0.39	.....	+ 9.05	12 34 33.74
	12 Canum Venat. ....	48.4	5.6	22.5	39.8	57.0	48 22.66	+ 0.05	9.00	+ 9.05	12 48 31.76
	$\alpha$ Ursæ Minoris S. P.	25.5	37.5	49.0	59.5	11.0	0 48.50	+ 18.99	.....	+ 9.05	13 1 16.54
	Saturn 1 Limb Ring.....	.....	25.8	.....	53.7	.....	19 39.75	+ 0.48	.....	+ 9.10	16 19 49.33
	Saturn 2 Limb Ring.....	14.5	.....	42.7	.....	10.8	19 42.67	+ 0.48	.....	+ 9.10	16 19 52.25
June 6	$\alpha$ Bootis.....	43.8	57.9	12.1	26.3	40.5	8 12.12	+ 0.17	+ 9.38	+ 9.38	.....
June 7	$\delta$ Leonis.....	55.8	10.0	24.2	38.6	52.8	5 24.28	+ 0.10	+ 9.53	+ 9.49	11 5 33.87
	Mars 1 Limb.....	23.5	36.9	50.3	3.7	16.9	29 50.26	+ 0.19	.....	+ 9.49	11 29 59.94
	12 Canum Venat. ....	47.8	5.1	22.3	39.5	56.6	48 22.26	- 0.04	9.47	+ 9.50	12 48 31.72
	$\alpha$ Ursæ Minoris S. P.	31.5	40.5	54.0	4.0	16.0	0 53.20	+ 15.51	.....	+ 9.50	.....
	$\eta$ Bootis.....	25.8	39.8	53.9	8.0	22.1	46 53.92	+ 0.12	9.49	+ 9.50	13 47 3.54
	$\alpha$ Bootis.....	43.7	58.0	12.0	26.2	40.4	8 12.06	+ 0.11	9.49	+ 9.50	14 8 21.67
	Saturn 1 Limb Ring.....	34.5	.....	2.7	.....	30.9	19 2.70	+ 0.29	.....	+ 9.51	16 19 12.50
	Saturn 2 Limb Ring.....	.....	51.8	.....	20.0	.....	19 5.90	+ 0.29	.....	+ 9.51	16 19 15.70



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.			
		I.	II.	III.	IV.	V.				observed.	interpo- lated.				
June 7	Mercury 2 Limb.....	<i>s.</i> 48.3	<i>s.</i> 2.4	<i>s.</i> 16.5	<i>s.</i> .....	<i>s.</i> 44.2	<i>m.</i> 41	<i>s.</i> 16.35	<i>s.</i> + 0.12	<i>s.</i> .....	<i>s.</i> + 9.56	<i>h.</i> 3	<i>m.</i> 41	<i>s.</i> 26.03	
June 8	$\alpha$ Canis Minoris.....	15.9	29.3	42.7	56.2	9.5	30	42.72	+ 0.18	+ 9.66	+ 9.57	7	30	52.47	
	$\beta$ Geminorum.....	48.1	3.2	18.2	33.4	48.5	35	18.28	+ 0.05	9.54	+ 9.57	7	35	27.90	
	$\delta$ Leonis.....	55.6	10.0	24.2	38.5	52.7	5	24.20	+ 0.09	9.61	+ 9.59	11	5	33.88	
	Mars 1 Limb.....	49.7	3.0	16.2	29.5	42.8	31	16.24	+ 0.19	.....	+ 9.60	11	31	26.03	
	$\beta$ Leonis.....	15.1	28.7	42.6	56.4	10.3	40	42.62	+ 0.13	9.56	+ 9.60	11	40	52.35	
	Jupiter 1 Limb.....	.....	9.6	.....	36.1	.....	34	22.85	+ 0.23	.....	+ 9.62	12	34	32.70	
	Jupiter 2 Limb.....	58.7	.....	25.4	.....	51.8	34	25.30	+ 0.23	.....	+ 9.62	12	34	35.15	
	12 Canum Venat. ....	47.8	5.0	22.2	39.5	56.6	48	22.22	- 0.05	9.51	+ 9.62	12	48	31.79	
	$\alpha$ Ursæ Minoris S. P.	31.0	42.0	53.5	3.5	15.5	0	53.10	+ 16.25	.....	+ 9.62	.....	.....	.....	.....
	Saturn 1 Limb Ring	.....	30.6	.....	58.8	.....	18	44.70	+ 0.29	.....	+ 9.68	16	18	54.67	
Saturn 2 Limb Ring	19.5	.....	47.6	.....	15.8	18	47.63	+ 0.29	.....	+ 9.68	16	18	57.60		
June 10	$\alpha$ Virginis.....	7.7	21.3	35.0	48.3	1.9	16	34.84	+ 0.23	+ 10.16	+ 10.38	12	16	45.45	
	$\delta$ Ophiuchi.....	20.4	33.5	46.8	0.2	13.7	5	46.92	+ 0.19	10.47	+ 10.41	16	5	57.52	
	$\alpha$ Scorpii.....	.....	10.3	25.0	39.8	54.6	19	25.03	+ 0.28	10.61	+ 10.40	16	19	35.71	
	$\alpha$ Aurigæ.....	0.3	19.2	38.3	57.5	16.5	4	38.36	- 0.18	+ 10.26	+ 10.34	5	4	48.52	
June 11	Sun 1 Limb.....	55.1	9.6	24.1	38.5	53.0	14	24.06	+ 0.04	.....	+ 10.34	5	14	34.44	
	Sun 2 Limb.....	12.4	27.0	41.5	56.0	10.5	16	41.48	+ 0.04	.....	+ 10.34	5	16	51.86	
	$\beta$ Geminorum.....	47.4	2.3	17.4	.....	.....	35	17.47	0.00	10.40	+ 10.36	7	35	27.83	
	Venus 1 Limb.....	.....	8.7	23.0	.....	.....	12	23.05	+ 0.04	.....	+ 10.37	8	12	33.46	
	$\alpha$ Ursæ Minoris S. P.	.....	.....	55.0	6.0	17.0	0	54.90	+ 15.83	.....	+ 10.48	.....	.....	.....	
June 12	$\alpha$ Bootis.....	42.5	56.6	10.7	24.8	39.0	8	10.72	0.00	+ 10.92	+ 11.05	14	8	21.77	
	$\epsilon$ Bootis.....	18.9	34.2	49.1	4.1	19.2	37	49.10	- 0.04	10.89	+ 11.06	14	38	0.12	
	$\beta$ Libræ.....	45.5	59.1	12.6	26.1	39.6	8	12.58	+ 0.14	10.96	+ 11.07	15	8	23.79	
	$\alpha$ Coronæ borealis....	14.0	29.1	43.8	58.7	13.8	27	43.88	- 0.04	11.25	+ 11.08	15	27	54.92	
	$\alpha$ Serpentis.....	44.9	58.5	11.8	25.2	38.6	36	11.80	+ 0.07	11.33	+ 11.08	15	36	22.95	
	Saturn 1 Limb Ring	.....	.....	32.0	.....	0.2	17	32.03	+ 0.17	.....	+ 11.10	16	17	43.30	
	Saturn 2 Limb Ring	.....	20.8	.....	48.7	.....	17	34.75	+ 0.17	.....	+ 11.10	16	17	46.02	
	Mercury 2 Limb.....	27.5	41.7	55.8	10.2	24.4	16	55.92	- 0.04	.....	+ 11.38	4	17	7.26	
June 13	Sun 1 Limb.....	11.7	26.2	40.7	55.3	9.7	22	40.72	- 0.05	.....	+ 11.41	5	22	52.08	
	Sun 2 Limb.....	29.1	43.7	58.1	12.7	27.2	24	58.16	- 0.05	.....	+ 11.41	5	25	9.52	
	$\alpha$ Canis Minoris.....	14.3	27.7	40.9	54.4	7.8	30	41.02	+ 0.02	+ 11.53	+ 11.46	7	30	52.50	
	$\beta$ Geminorum.....	46.4	1.4	16.6	31.6	46.7	35	16.54	- 0.08	11.42	+ 11.46	7	35	27.92	
	Venus 1 Limb.....	25.1	39.3	53.6	8.0	22.2	21	53.64	- 0.05	.....	+ 11.48	8	22	5.07	
	$\alpha$ Ursæ Minoris S. P.	34.5	46.5	57.5	8.0	19.5	0	57.20	+ 13.87	.....	+ 11.58	.....	.....	.....	
	$\epsilon$ Bootis.....	41.7	55.9	10.0	24.2	38.4	8	10.04	- 0.03	11.62	+ 11.60	14	8	21.61	
	$\epsilon$ Bootis.....	18.4	33.4	48.6	3.6	18.6	37	48.52	- 0.07	11.49	+ 11.61	14	38	0.06	
	$\alpha^2$ Libræ.....	22.0	35.8	49.7	3.6	17.2	41	49.66	+ 0.10	11.76	+ 11.61	14	42	1.37	
	Saturn 1 Limb Ring	.....	59.8	.....	27.8	.....	17	13.80	+ 0.11	.....	+ 11.64	16	17	25.55	
	Saturn 2 Limb Ring	48.7	.....	16.8	.....	44.8	17	16.77	+ 0.11	.....	+ 11.64	16	17	28.52	
Mercury 2 Limb.....	16.3	30.5	44.7	59.1	13.3	24	44.78	- 0.03	.....	+ 11.85	4	24	56.60		
June 14	Sun 1 Limb.....	20.2	35.0	49.2	3.6	18.1	26	49.22	- 0.04	.....	+ 11.87	5	27	1.05	
	Sun 2 Limb.....	37.7	52.3	6.8	21.5	36.0	29	6.86	- 0.04	.....	+ 11.87	5	29	18.69	
	$\alpha$ Canis Minoris.....	13.7	27.2	40.5	53.8	7.2	30	40.48	+ 0.04	+ 12.05	+ 11.91	7	30	52.43	
	$\beta$ Geminorum.....	45.8	1.0	16.1	31.2	46.4	35	16.10	- 0.07	11.85	+ 11.91	7	35	27.94	
	Venus 1 Limb.....	8.0	22.2	36.5	50.8	5.1	26	36.52	- 0.03	.....	+ 11.92	8	26	48.41	
	Mars 1 Limb.....	47.8	1.1	14.5	27.7	41.0	40	14.42	+ 0.06	.....	+ 11.98	11	40	26.46	
	Jupiter 1 Limb.....	14.6	.....	41.1	.....	7.6	34	41.10	+ 0.08	.....	+ 11.99	12	34	53.17	
	Jupiter 2 Limb.....	.....	30.1	.....	56.8	.....	34	43.45	+ 0.08	.....	+ 11.99	12	34	55.52	
	12 Canum Venat. ....	45.5	2.7	19.7	36.8	54.2	48	19.78	- 0.16	11.97	+ 11.99	12	48	31.61	
	$\alpha$ Ursæ Minoris S. P.	35.0	46.0	56.5	8.0	19.0	0	56.90	+ 14.63	.....	+ 12.00	.....	.....	.....	.....
	$\eta$ Bootis.....	23.5	37.5	51.6	5.6	19.7	46	51.58	- 0.02	11.93	+ 12.01	13	47	3.57	

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
June 14	$\alpha$ Bootis .....	41.3	55.5	9.6	23.8	37.8	m. s. 8 9.60	- 0.02	+ 12.05	+ 12.01	h. m. s. 14 8 21.59	
	Saturn 1 Limb Ring .....	28.0	.....	56.2	.....	24.1	16 56.10	+ 0.14	.....	+ 12.04	16 17 8.28	
	Saturn 2 Limb Ring .....	.....	44.7	.....	13.1	.....	16 58.90	+ 0.14	.....	+ 12.04	16 17 11.08	
	Mercury 2 Limb.....	18.4	32.6	47.1	1.4	15.6	32 47.02	+ 0.04	.....	+ 12.22	4 32 59.28	
June 15	Sun 1 Limb.....	28.8	43.4	58.0	12.4	27.1	30 57.94	+ 0.03	.....	+ 12.24	5 31 10.21	
	Sun 2 Limb.....	46.6	1.2	15.6	30.2	44.6	33 15.64	+ 0.03	.....	+ 12.24	5 33 27.91	
	Venus 1 Limb.....	49.0	3.3	17.7	32.0	46.2	31 17.64	+ 0.04	.....	+ 12.28	8 31 29.96	
	Moon 1 Limb .....	0.5	15.0	29.4	43.8	58.1	17 29.36	+ 0.07	.....	+ 12.29	9 17 41.72	
	$\epsilon$ Leonis.....	1.6	16.2	30.7	45.4	0.0	36 30.78	+ 0.02	+ 12.37	+ 12.29	9 36 43.09	
	$\alpha$ Leonis.....	8.9	22.5	36.1	49.7	3.4	59 36.12	+ 0.11	12.35	+ 12.30	9 59 48.53	
	Mars 1 Limb.....	21.4	34.6	47.8	1.1	14.4	41 47.86	+ 0.16	.....	+ 12.32	11 42 0.34	
	Jupiter 1 Limb .....	19.7	.....	46.2	.....	13.0	34 46.30	+ 0.19	.....	+ 12.34	12 34 58.83	
	Jupiter 2 Limb .....	.....	35.5	.....	2.1	.....	34 48.80	+ 0.19	.....	+ 12.34	12 35 1.33	
	12 Canum Venat. ....	45.3	2.5	19.5	36.6	53.6	48 19.50	- 0.11	12.18	+ 12.35	12 48 31.74	
	$\alpha$ Ursæ Minoris S. P. ....	32.5	44.0	55.5	5.0	17.5	0 54.90	+ 17.32	.....	+ 12.35	.....	
	$\eta$ Bootis.....	22.8	36.8	51.0	5.1	19.3	46 51.00	+ 0.06	12.42	+ 12.37	13 47 3.43	
	$\alpha$ Bootis .....	41.0	55.1	9.2	23.4	37.5	8 9.24	+ 0.05	12.33	+ 12.38	14 8 21.67	
	Saturn 1 Limb Ring .....	.....	24.2	.....	52.5	.....	16 38.35	+ 0.26	.....	+ 12.42	16 16 51.03	
	Saturn 2 Limb Ring .....	13.2	.....	41.6	.....	9.8	16 41.53	+ 0.26	.....	+ 12.42	16 16 54.21	
June 16	$\epsilon$ Leonis .....	1.3	15.7	30.5	44.9	59.7	36 30.42	- 0.04	+ 12.79	+ 12.81	9 36 43.19	
	$\alpha$ Leonis .....	8.6	22.2	35.6	49.4	3.0	59 35.76	+ 0.03	12.79	+ 12.81	9 59 48.60	
	Moon 1 Limb .....	40.9	55.0	8.9	22.8	36.7	8 8.86	+ 0.03	.....	+ 12.82	10 8 21.71	
	$\rho$ Leonis .....	41.2	54.7	8.1	21.6	35.1	24 8.14	+ 0.04	.....	+ 12.82	10 24 21.00	
	$\delta$ Leonis .....	52.5	6.7	21.0	35.1	49.5	5 20.96	- 0.02	12.88	+ 12.84	11 5 33.78	
	$\alpha$ Tauri.....	0.7	14.5	28.6	42.3	56.1	26 28.44	- 0.07	+ 13.31	+ 13.17	4 26 41.54	
	Mercury 2 Limb.....	2.3	16.6	31.1	45.5	59.9	49 31.08	- 0.10	.....	+ 13.18	4 49 44.16	
	$\alpha$ Aurigæ .....	57.5	16.6	35.7	54.7	13.8	4 35.66	- 0.26	13.17	+ 13.18	5 4 48.58	
June 17	Sun 1 Limb.....	47.1	1.5	15.8	30.4	44.7	39 15.90	- 0.10	.....	+ 13.19	5 39 28.99	
	Sun 2 Limb.....	4.6	19.1	33.7	48.0	2.4	41 33.56	- 0.10	.....	+ 13.19	5 41 46.65	
	$\alpha$ Canis Minoris .....	12.6	26.1	39.4	52.6	6.0	30 39.34	- 0.04	13.27	+ 13.23	7 30 52.53	
	$\beta$ Geminorum .....	44.5	59.6	14.8	29.8	45.0	35 14.74	- 0.12	13.26	+ 13.23	7 35 27.85	
	Venus 1 Limb.....	6.0	20.5	34.8	49.0	3.2	40 34.70	- 0.09	.....	+ 13.25	8 40 47.86	
	$\rho$ Leonis .....	40.7	54.1	7.7	21.2	34.5	24 7.64	- 0.05	.....	+ 13.26	10 24 20.85	
	Moon 1 Limb .....	34.2	47.9	1.5	15.1	28.8	55 1.50	- 0.04	.....	+ 13.27	10 55 14.73	
	$\delta$ Leonis .....	52.1	6.4	20.5	35.0	49.2	5 20.64	- 0.09	13.26	+ 13.27	11 5 33.82	
	$\sigma$ Leonis.....	11.3	24.7	38.1	51.5	4.8	12 38.08	- 0.04	.....	+ 13.27	11 12 51.31	
	$\beta$ Leonis .....	11.5	25.3	39.0	52.7	6.5	40 39.00	- 0.07	13.29	+ 13.27	11 40 52.20	
	Mars 1 Limb .....	31.3	44.5	57.8	11.2	24.4	44 57.84	- 0.03	.....	+ 13.27	11 45 11.08	
	Jupiter 1 Limb .....	.....	45.8	.....	12.2	.....	34 59.00	- 0.01	.....	+ 13.28	12 35 12.27	
	Jupiter 2 Limb .....	34.7	.....	1.3	.....	28.0	35 1.33	- 0.01	.....	+ 13.28	12 35 14.60	
	12 Canum Venat. ....	44.4	1.5	18.5	35.7	52.8	48 18.58	- 0.19	13.16	+ 13.28	12 48 31.67	
	$\alpha$ Ursæ Minoris S. P. ....	39.0	50.0	2.5	10.5	22.0	1 0.80	+ 11.96	.....	+ 13.28	.....	
	Mercury 2 Limb.....	43.4	57.8	12.3	26.4	41.3	58 12.24	- 0.04	.....	+ 13.40	4 58 25.60	
June 18	Sun 1 Limb.....	56.2	10.7	25.2	39.7	54.3	43 25.22	- 0.04	.....	+ 13.41	5 43 38.59	
	Sun 2 Limb.....	13.7	28.2	42.8	57.5	12.1	45 42.86	- 0.04	.....	+ 13.41	5 45 56.23	
	Venus 1 Limb.....	42.6	.....	10.7	.....	39.5	45 10.94	- 0.02	.....	+ 13.43	8 45 24.35	
	Mercury 2 Limb.....	35.6	50.2	4.6	.....	.....	7 4.64	+ 0.02	.....	+ 13.58	5 7 18.24	
June 19	Sun 1 Limb.....	5.6	20.0	34.6	49.0	3.6	47 34.56	+ 0.02	.....	+ 13.58	5 47 48.16	
	Sun 2 Limb.....	23.1	37.7	52.1	6.6	21.2	49 52.14	+ 0.02	.....	+ 13.58	5 50 5.74	
	$\beta$ Geminorum.....	44.1	59.3	14.5	29.6	44.6	35 14.42	- 0.01	+ 13.48	+ 13.59	7 35 28.00	
	Venus 1 Limb.....	16.9	31.0	45.2	59.2	13.4	49 45.14	+ 0.04	.....	+ 13.60	8 49 58.78	
	$\alpha$ Leonis .....	7.6	21.3	34.8	48.3	1.8	59 34.76	+ 0.08	13.72	+ 13.61	9 59 48.45	
	$\beta$ Leonis .....	10.7	24.7	38.5	52.4	6.2	40 38.50	+ 0.06	13.64	+ 13.62	11 40 52.18	



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpolated.			
June 19	Mars 1 Limb .....	45.4	58.6	12.0	25.3	38.5	48	11.96	+ 0.12	.....	+ 13.62	h. m. s.	11 48 25.70	
	$\eta$ Virginis .....	1.6	14.7	28.0	41.4	54.7	11	28.08	+ 0.13	.....	+ 13.62		12 11 41.83	
	Moon 1 Limb .....	27.1	40.7	54.4	7.9	.....	22	54.33	+ 0.16	.....	+ 13.62		12 23 8.11	
	Jupiter 1 Limb .....	47.7	.....	14.2	.....	40.7	35	14.20	+ 0.15	.....	+ 13.62		12 35 27.97	
	Jupiter 2 Limb .....	.....	3.5	.....	29.9	.....	35	16.70	+ 0.15	.....	+ 13.62		12 35 30.47	
	12 Canum Venat. ....	43.6	0.8	18.0	35.2	52.3	48	17.98	- 0.11	+ 13.65	+ 13.62		12 48 31.49	
	$\alpha$ Ursæ Minoris S. P. ...	35.0	47.0	59.5	11.0	21.5	0	58.80	+ 15.06	.....	+ 13.62		.....	
	$\epsilon$ Bootis .....	16.4	31.2	46.3	1.3	16.4	37	46.32	- 0.01	13.60	+ 13.62		14 37 59.93	
	Saturn 1 Limb Ring .....	1.7	.....	29.9	.....	58.0	15	29.87	+ 0.20	.....	+ 13.62		16 15 43.69	
	Saturn 2 Limb Ring .....	.....	18.8	.....	47.0	.....	15	32.90	+ 0.20	.....	+ 13.62		16 15 46.72	
June 20	Sun 2 Limb .....	.....	.....	1.5	.....	30.7	54	1.59	- 0.07	.....	+ 13.63		5 54 15.15	
	Mars 1 Limb .....	24.5	37.8	50.8	4.1	17.6	49	50.96	+ 0.01	.....	+ 13.63		11 50 4.60	
	12 Canum Venat. ....	43.8	0.9	18.1	35.2	52.3	48	18.06	- 0.18	+ 13.62	+ 13.63		12 48 31.51	
	$\alpha$ Ursæ Minoris S. P. ...	38.0	.....	2.5	13.0	24.5	1	1.72	+ 13.11	.....	+ 13.63		.....	
	Moon 1 Limb .....	.....	.....	44.4	58.2	6	30.59	.....	+ 0.06	.....	+ 13.63		13 6 44.28	
	$\eta$ Bootis .....	21.6	35.7	49.8	4.0	18.0	46	49.82	- 0.05	13.67	+ 13.63		13 47 3.40	
	$\alpha$ Bootis .....	39.5	53.7	8.0	22.1	36.3	8	7.92	- 0.06	13.73	+ 13.63		14 8 21.49	
	$\beta$ Libræ .....	43.3	56.5	10.1	23.7	37.2	8	10.16	+ 0.05	13.47	+ 13.63		15 8 23.84	
	$\alpha$ Coronæ borealis .....	11.5	26.6	41.5	56.6	11.4	27	41.52	- 0.10	13.65	+ 13.64		15 27 55.06	
June 24	$\beta$ Geminorum .....	43.8	58.8	13.9	29.1	44.2	35	13.96	- 0.10	+ 14.06	+ 14.06		.....	
INSTRUMENT REVERSED.														
June 25	Sun 1 Limb .....	1.4	15.9	30.3	44.8	59.4	12	30.36	+ 0.29	.....	+ 14.38		6 12 45.03	
	Sun 2 Limb .....	19.0	33.6	48.0	2.5	17.2	14	48.06	+ 0.29	.....	+ 14.38		6 15 2.73	
June 28	Sun 1 Limb .....	27.6	42.1	56.6	11.1	25.7	24	56.62	+ 0.29	.....	+ 15.38		6 25 12.29	
	Sun 2 Limb .....	45.2	59.6	14.3	28.8	43.3	27	14.24	+ 0.29	.....	+ 15.38		6 27 29.91	
	$\alpha$ Ursæ Minoris S. P. ...	.....	.....	.....	.....	36.0	1	14.00	+ 5.43	.....	+ 15.47		.....	
	$\epsilon$ Bootis .....	.....	.....	.....	59.0	14.2	37	44.10	+ 0.27	+ 15.46	+ 15.49		14 37 59.86	
	$\alpha$ Coronæ borealis .....	9.3	24.2	39.3	.....	.....	27	39.21	+ 0.28	15.54	+ 15.51		15 27 55.00	
June 29	Sun 1 Limb .....	.....	.....	5.0	19.6	34.2	29	5.10	+ 0.28	.....	+ 15.85		6 29 21.23	
	Sun 2 Limb .....	53.7	.....	.....	37.2	.....	31	22.70	+ 0.28	.....	+ 15.85		6 31 38.83	
	$\beta$ Geminorum .....	41.5	56.7	11.8	27.0	42.1	35	11.82	+ 0.26	+ 15.87	+ 15.88		7 35 27.96	
	12 Canum Venat. ....	40.8	58.0	15.2	32.3	49.5	48	15.16	+ 0.21	16.00	+ 15.99		12 48 31.36	
	$\alpha$ Ursæ Minoris S. P. ...	.....	4.0	.....	.....	36.0	1	14.40	+ 5.05	.....	+ 16.00		.....	
	$\eta$ Bootis .....	18.8	32.8	47.0	1.1	15.2	46	46.98	+ 0.30	16.08	+ 16.01		13 47 3.29	
	$\alpha$ Bootis .....	36.8	51.0	5.2	19.3	33.5	8	5.16	+ 0.30	16.05	+ 16.01		14 8 21.47	
	$\epsilon$ Bootis .....	13.6	28.6	43.6	58.6	13.7	37	43.62	+ 0.26	15.94	+ 16.02		14 37 59.90	
	Saturn 1 Limb Ring .....	26.0	.....	53.8	.....	21.9	12	53.90	+ 0.50	.....	+ 16.04		16 13 10.44	
July 1	Saturn 2 Limb Ring .....	.....	42.8	.....	11.0	.....	12	56.90	+ 0.50	.....	+ 16.04		16 13 13.44	
	Sun 1 Limb .....	52.1	6.6	20.9	35.6	49.9	37	21.02	+ 0.41	.....	+ 16.62		6 37 38.05	
	Sun 2 Limb .....	9.5	24.0	38.6	53.0	7.4	39	38.50	+ 0.41	.....	+ 16.62		6 39 55.53	
	$\alpha$ Serpentis .....	39.2	.....	5.8	19.2	.....	36	5.86	+ 0.51	+ 16.82	+ 16.76		15 36 23.13	
	$\delta$ Ophiuchi .....	13.6	26.8	40.2	53.5	6.8	5	40.18	+ 0.57	16.88	+ 16.76		16 5 57.51	
	Saturn 1 Limb Ring .....	.....	11.1	.....	39.2	.....	12	25.15	+ 0.69	.....	+ 16.76		16 12 42.60	
	Saturn 2 Limb Ring .....	0.4	.....	28.2	.....	56.4	12	28.33	+ 0.69	.....	+ 16.76		16 12 45.78	
	$\alpha$ Herculis .....	36.4	50.6	4.2	18.1	31.7	7	4.20	+ 0.46	16.71	+ 16.77		17 7 21.43	
	Groomb. 944 S. P. ....	28.0	.....	39.0	15.0	50.5	10	39.32	+ 2.96	.....	+ 16.77		17 10 59.05	
	$\alpha$ Ophiuchi .....	46.2	59.9	13.6	27.2	40.8	27	13.54	+ 0.47	16.68	+ 16.77		17 27 30.78	
July 2	$\delta$ Ophiuchi .....	13.3	26.6	39.8	53.3	6.5	5	39.90	+ 0.74	+ 16.99	+ 16.90		16 5 57.54	
	Saturn 1 Limb Ring .....	43.4	.....	11.6	.....	39.5	12	11.50	+ 0.88	.....	+ 16.90		16 12 29.28	

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
July 2	Saturn 2 Limb Ring	.....	0.2	.....	28.7	.....	m. s. 12 14.45	+ 0.88	.....	+ 16.90	h. m. s. 16 12 32.23
	$\delta$ Ursæ Minoris	.....	.....	15.0	55.5	.....	24 13.50	- 4.80	.....	+ 16.94	.....
	$\alpha$ Lyrae	40.7	57.8	14.9	31.9	48.8	31 14.82	+ 0.38	+ 16.85	+ 16.94	18 31 32.14
	$\beta$ Lyrae	22.1	37.7	53.7	9.5	25.3	43 53.66	+ 0.43	16.88	+ 16.95	18 44 11.04
	$\alpha$ Tauri	56.4	10.4	24.2	37.8	51.7	26 24.10	+ 0.39	+ 17.55	+ 17.36	4 26 41.85
	$\alpha$ Aurigæ	52.9	12.1	31.1	50.3	9.5	4 31.18	+ 0.23	17.56	+ 17.39	5 4 48.80
July 3	Sun 1 Limb	6.8	21.4	.....	50.3	5.1	45 35.90	+ 0.35	.....	+ 17.47	6 45 53.72
	Sun 2 Limb	24.6	39.0	53.4	7.8	22.4	47 53.44	+ 0.35	.....	+ 17.47	6 48 11.26
	Mercury 1 Limb	38.4	53.1	7.8	22.2	37.3	19 7.76	+ 0.34	.....	+ 17.49	7 19 25.59
	Venus 1 Limb	2.2	16.1	30.2	43.8	57.7	50 30.00	+ 0.39	.....	+ 17.61	9 50 48.00
	$\alpha$ Leonis	3.4	16.8	30.6	44.0	57.7	59 30.50	+ 0.40	17.59	+ 17.61	9 59 48.51
	Mars 1 Limb	3.8	17.1	30.3	43.7	56.8	12 30.34	+ 0.46	.....	+ 17.67	12 12 48.47
	Jupiter 1 Limb	42.8	.....	9.6	.....	36.3	38 9.57	+ 0.48	.....	+ 17.68	12 38 27.73
	Jupiter 2 Limb	.....	58.3	.....	25.1	.....	38 11.70	+ 0.48	.....	+ 17.68	12 38 29.86
	12 Canum Venat.	39.1	56.2	13.4	30.5	47.6	48 13.36	+ 0.27	17.67	+ 17.68	12 48 31.31
	$\alpha$ Ursæ Minoris S. P.	53.0	5.0	14.5	26.5	38.0	1 15.40	+ 5.86	.....	+ 17.68	.....
	$\eta$ Bootis	17.1	31.2	45.3	59.5	13.5	46 45.32	+ 0.37	17.63	+ 17.69	13 47 3.38
	$\alpha$ Bootis	35.2	49.2	3.4	17.4	31.6	8 3.36	+ 0.37	17.74	+ 17.70	14 8 21.43
	$\alpha$ Coronæ borealis	7.0	21.8	36.8	51.8	6.7	27 36.82	+ 0.33	17.84	+ 17.72	15 27 54.87
	Saturn 1 Limb Ring	.....	43.7	.....	11.8	.....	11 57.75	+ 0.57	.....	+ 17.73	16 12 16.05
	Saturn 2 Limb Ring	32.6	.....	0.8	.....	28.9	12 0.77	+ 0.57	.....	+ 17.73	16 12 19.07
	* D. + 15° 40'	56.8	10.8	24.5	38.4	52.4	42 24.58	+ 0.39	.....	+ 17.74	16 42 42.71
	* D. + 16 4	12.9	26.8	40.6	54.3	8.2	43 40.56	+ 0.39	.....	+ 17.74	16 43 58.69
	* D. + 28 54	44.4	59.4	14.7	29.8	44.8	11 14.62	+ 0.32	.....	+ 17.74	17 11 32.68
	* D. + 32 2	43.8	59.8	15.3	30.8	46.9	15 15.32	+ 0.31	.....	+ 17.74	17 15 33.37
	* D. + 34 50	11.8	28.1	44.4	0.5	16.8	20 44.32	+ 0.29	.....	+ 17.75	17 21 2.36
	* D. + 35 4	55.4	11.6	27.8	44.1	0.4	23 27.86	+ 0.29	.....	+ 17.75	17 23 45.90
	* D. + 34 57	20.0	36.2	52.4	8.6	24.7	25 52.38	+ 0.29	.....	+ 17.75	17 26 10.42
	* D. + 41 15	30.0	47.7	5.6	23.2	41.1	45 5.52	+ 0.26	.....	+ 17.75	17 45 23.53
	* D. + 41 31	13.6	31.3	49.0	6.8	24.6	49 49.06	+ 0.26	.....	+ 17.75	17 50 7.07
July 4	Sun 1 Limb	14.8	29.3	43.6	58.1	12.6	49 43.68	+ 0.32	.....	+ 17.95	6 50 1.95
	Sun 2 Limb	31.7	46.4	0.7	15.2	29.7	52 0.74	+ 0.32	.....	+ 17.95	6 52 19.01
	Mercury 1 Limb	38.2	52.7	7.4	21.9	36.5	28 7.34	+ 0.32	.....	+ 17.95	7 28 25.61
	Venus 1 Limb	8.8	22.6	36.4	50.2	3.9	54 36.38	+ 0.36	.....	+ 17.99	9 54 54.73
	$\alpha$ Leonis	2.8	16.6	30.1	43.8	57.4	59 30.14	+ 0.37	+ 17.98	+ 17.99	9 59 48.50
	Mars 1 Limb	54.4	7.5	20.9	34.2	47.4	14 20.88	+ 0.43	.....	+ 18.03	12 14 39.34
	Jupiter 1 Limb	.....	13.2	.....	39.8	.....	38 26.50	+ 0.45	.....	+ 18.03	12 38 44.98
	Jupiter 2 Limb	2.1	.....	28.7	.....	55.5	38 28.77	+ 0.45	.....	+ 18.03	12 38 47.25
	12 Canum Venat.	38.7	55.8	13.0	30.2	47.4	48 13.02	+ 0.25	18.02	+ 18.03	12 48 31.30
	$\alpha$ Ursæ Minoris S. P.	55.0	6.0	15.5	27.0	38.5	1 16.40	+ 5.46	.....	+ 18.04	.....
	$\eta$ Bootis	16.7	30.8	44.8	59.0	13.1	46 44.88	+ 0.34	18.09	+ 18.04	13 47 3.26
	$\alpha$ Bootis	34.7	48.9	3.0	17.1	31.3	8 3.00	+ 0.34	18.12	+ 18.04	14 8 21.38
	$\alpha$ Coronæ borealis	6.8	21.7	36.6	51.6	6.6	27 36.66	+ 0.31	18.01	+ 18.05	15 27 55.02
	Saturn 1 Limb Ring	16.6	.....	44.8	.....	13.0	11 44.80	+ 0.54	.....	+ 18.05	16 12 3.39
	Saturn 2 Limb Ring	.....	33.7	.....	1.8	.....	11 47.75	+ 0.54	.....	+ 18.05	16 12 6.34
	* D. + 15° 40'	56.5	10.3	24.0	37.8	51.7	42 24.06	+ 0.36	.....	+ 18.05	16 42 42.47
	* D. + 16 4	12.3	26.2	40.0	53.8	7.7	43 40.00	+ 0.36	.....	+ 18.05	16 43 58.41
	* D. + 28 54	43.8	59.1	14.2	29.4	44.6	11 14.22	+ 0.29	.....	+ 18.05	17 11 32.56
	* D. + 32 2	43.5	59.4	15.3	30.8	46.6	15 15.12	+ 0.28	.....	+ 18.05	17 15 33.45
	* D. + 34 50	11.6	27.7	44.2	0.4	16.5	20 44.08	+ 0.26	.....	+ 18.05	17 21 2.39
	* D. + 35 4	55.2	11.4	27.6	43.8	0.2	23 27.64	+ 0.26	.....	+ 18.05	17 23 45.95
	* D. + 34 57	19.3	35.8	52.0	8.2	24.6	25 51.98	+ 0.26	.....	+ 18.05	17 26 10.29
	* D. + 34 52	11.7	27.8	44.1	0.3	16.5	28 44.08	+ 0.26	.....	+ 18.05	17 29 2.39
	* D. + 41 15	30.0	47.8	5.8	23.1	40.7	45 5.48	+ 0.24	.....	+ 18.05	17 45 23.77
	* D. + 41 31	13.4	31.0	48.8	6.6	24.3	49 48.82	+ 0.24	.....	+ 18.05	17 50 7.11
	$\alpha$ Ursæ Minoris	4.0	16.0	.....	.....	.....	1 26.60	- 4.52	.....	+ 18.08	.....



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	inter- polated.	
July 4	Moon 2 Limb.....	34.0	48.2	2.0	16.2	30.1	35	2.10	+ 0.37	.....	+18.08	1 35 20.55
July 5	Sun 1 Limb.....	21.9	36.5	50.9	5.3	19.8	53	50.88	+ 0.31	.....	+18.09	6 54 9.28
	Sun 2 Limb.....	39.0	53.6	7.9	22.3	36.8	56	7.92	+ 0.31	.....	+18.09	6 56 26.32
	Mercury 1 Limb.....	28.0	42.8	57.2	11.7	26.3	36	57.20	+ 0.31	.....	+18.10	7 37 15.61
July 8	Sun 1 Limb.....	42.3	56.8	11.2	25.6	40.0	6	11.18	+ 0.26	.....	+18.31	7 6 29.75
	Sun 2 Limb.....	59.0	13.5	27.8	42.3	56.8	8	27.88	+ 0.26	.....	+18.31	7 8 46.45
	Mercury 1 Limb.....	55.5	9.8	24.4	38.6	53.1	2	24.28	+ 0.27	.....	+18.31	8 2 42.86
	Venus 1 Limb.....	17.1	30.9	44.7	58.1	11.9	10	44.54	+ 0.31	.....	+18.32	10 11 3.17
	Mars 1 Limb.....	24.5	37.8	51.1	4.6	17.8	21	51.16	+ 0.39	.....	+18.32	12 22 9.87
	12 Canum Venat. ....	38.4	55.7	12.7	29.8	47.0	48	12.72	+ 0.17	+18.33	+18.32	12 48 31.21
	$\alpha$ Ursæ Minoris S. P. ....	59.0	11.0	21.0	32.5	44.0	1	21.50	+ 6.52	.....	+18.33	13 1 46.35
	$\eta$ Bootis.....	16.5	30.5	44.4	58.6	12.7	46	44.54	+ 0.28	18.45	+18.33	13 47 3.15
	$\alpha$ Bootis.....	34.5	48.6	2.8	16.8	31.1	8	2.76	+ 0.28	18.37	+18.33	14 8 21.37
	$\beta$ Libræ.....	38.2	51.5	5.0	18.4	31.7	8	4.96	+ 0.43	18.22	+18.33	15 8 23.72
	$\alpha$ Coronæ borealis.....	6.6	21.5	36.4	51.3	6.3	27	36.42	+ 0.24	18.29	+18.33	15 27 54.99
	$\alpha$ Serpentis.....	37.7	51.1	4.5	17.8	31.2	36	4.46	+ 0.35	18.34	+18.33	15 36 23.14
	Saturn 1 Limb Ring.....	.....	41.8	.....	10.0	.....	10	55.90	+ 0.50	.....	+18.33	16 11 14.73
	Saturn 2 Limb Ring.....	30.8	.....	58.8	.....	26.8	10	58.80	+ 0.50	.....	+18.33	16 11 17.63
	* D. + 15° 40'.....	56.3	10.0	23.7	37.6	51.5	42	23.82	+ 0.30	.....	+18.33	16 42 42.45
	* D. + 16 4.....	12.2	26.0	39.8	53.6	7.5	43	39.82	+ 0.30	.....	+18.33	16 43 58.45
	A. S. C. 1956.....	32.0	.....	.....	.....	25.2	56	58.60	+ 0.38	.....	.....	.....†
	.....	.....	45.9	59.0	12.4	.....	.....	59.10	+ 0.38	.....	+18.33	16 57 17.81
	* D. + 28° 54'.....	43.5	58.8	13.8	29.2	44.4	11	13.94	+ 0.23	.....	+18.33	17 11 32.50
	* D. + 32 2.....	43.7	59.0	14.9	30.4	46.2	15	14.84	+ 0.21	.....	+18.33	17 15 33.38
	* D. + 34 50.....	11.4	27.3	43.8	0.1	16.2	20	43.76	+ 0.19	.....	+18.33	17 21 2.28
	* D. + 35 4.....	55.1	11.1	27.3	43.5	59.7	23	27.34	+ 0.19	.....	+18.33	17 23 45.86
	* D. + 34 57.....	19.2	35.3	51.6	8.0	24.4	25	51.70	+ 0.19	.....	+18.33	17 26 10.22
	* D. + 34 52.....	11.2	27.6	43.9	0.2	16.3	28	43.84	+ 0.19	.....	+18.33	17 29 2.36
	* D. + 41 15.....	29.6	47.6	4.8	22.8	40.4	45	5.04	+ 0.16	.....	+18.33	17 45 23.53
	* D. + 41 31.....	13.2	30.7	48.6	6.2	24.1	49	48.56	+ 0.16	.....	+18.33	17 50 7.05
	$\delta$ Ursæ Minoris.....	45.0	29.0	12.5	55.5	39.0	24	12.20	- 2.62	.....	+18.34	18 24 27.92
July 9	Sun 1 Limb.....	48.0	2.4	16.6	31.0	45.5	10	16.70	+ 0.22	.....	+18.82	7 10 35.74†
	Sun 2 Limb.....	4.5	19.0	33.4	47.7	2.2	12	33.36	+ 0.22	.....	+18.82	7 12 52.40†
	$\alpha$ Scorpii.....	47.0	1.6	16.5	31.4	46.0	19	16.50	+ 0.47	+19.04	+18.84	16 19 35.81†
	944 Groomb. S. P. ....	30.0	4.0	39.0	15.0	.....	10	39.58	+ 1.80	.....	+18.84	17 11 0.22†
	* D. + 32° 8'.....	15.5	31.3	47.0	2.5	18.2	15	46.90	+ 0.17	.....	+18.84	17 16 5.91†
	* D. + 34 39.....	12.2	28.0	44.5	0.5	16.7	27	44.38	+ 0.15	.....	+18.84	17 28 3.37†
	* D. + 34 52.....	.....	.....	.....	59.5	15.4	28	43.18	+ 0.15	.....	+18.84	17 29 2.17†
	$\delta$ Ursæ Minoris.....	41.5	25.0	8.0	51.5	.....	24	8.10	- 2.17	.....	+18.84	.....†
	$\alpha$ Lyræ.....	39.1	56.1	13.2	30.1	.....	31	13.12	+ 0.14	18.82	+18.84	18 31 32.10†
	$\beta$ Lyræ.....	20.4	36.1	52.1	.....	24.0	43	52.12	+ 0.16	18.74	+18.85	18 44 11.13†
July 10	$\zeta$ Aquilæ.....	.....	31.0	44.5	58.2	11.9	57	44.57	+ 0.26	18.74	+18.85	18 58 3.68†
	Venus 1 Limb.....	10.1	23.5	37.4	51.0	4.4	18	37.28	+ 0.31	.....	+19.00	10 18 56.59†
	$\delta$ Leonis.....	.....	.....	.....	28.5	43.0	5	14.36	+ 0.26	+19.00	+19.01	11 5 33.63†
July 12	$\beta$ Leonis.....	5.1	19.0	32.7	46.5	0.2	40	32.70	+ 0.29	19.02	+19.01	11 40 52.00†
	$\beta$ Leonis.....	.....	.....	32.4	46.2	0.0	40	32.42	+ 0.32	+19.25	+19.30	11 40 52.04†
	$\delta$ Ophiuchi.....	.....	24.6	37.9	51.2	4.5	5	37.90	+ 0.42	19.28	+19.34	16 5 57.66†
	Saturn 1 Limb Ring.....	.....	57.6	.....	25.6	.....	10	11.60	+ 0.52	.....	+19.34	16 10 31.46†
	Saturn 2 Limb Ring.....	.....	.....	14.4	.....	42.4	10	14.34	+ 0.52	.....	+19.34	16 10 34.20†
	$\alpha$ Scorpii.....	46.4	1.2	16.2	30.8	45.5	19	16.02	+ 0.56	19.42	+19.34	16 19 35.92†
	944 Groomb. S. P. ....	.....	5.0	40.0	16.0	.....	10	40.33	+ 2.23	.....	+19.35	17 11 1.91†
	* D. + 32° 8'.....	15.0	30.7	46.5	2.1	17.7	15	46.40	+ 0.23	.....	+19.35	17 16 5.98†
	* D. + 34 39.....	11.6	27.8	44.0	0.1	16.2	27	43.94	+ 0.21	.....	+19.36	17 28 3.51†
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
July 12	$\delta$ Ursæ Minoris .....	41.0	24.0	7.5	.....	.....	m. s. 24 7.43		- 2.59	.....	+ 19.37	.....†
July 13	Sun 1 Limb.....	7.4	21.7	36.1	50.5	4.8	26 36.10		+ 0.30	.....	+ 19.55	7 26 55.95†
	Sun 2 Limb.....	.....	38.1	52.4	6.7	21.1	28 52.42		+ 0.30	.....	+ 19.55	7 29 12.27†
	Mercury 1 Limb.....	.....	49.4	3.4	17.6	32.0	41 3.50		+ 0.30	.....	+ 19.56	8 41 23.36†
	$\alpha$ Leonis.....	.....	.....	28.6	42.2	55.6	59 28.51		+ 0.34	+ 19.63	+ 19.58	9 59 48.43†
	Venus 1 Limb.....	45.7	59.2	12.6	26.2	40.0	30 12.74		+ 0.36	.....	+ 19.59	10 30 32.69†
	$\alpha$ Serpentis.....	36.3	49.7	3.2	.....	30.0	36 3.14		+ 0.38	19.60	+ 19.64	15 36 23.16†
July 15	Sun 1 Limb.....	14.4	28.6	43.0	57.4	11.6	34 43.00		+ 0.30	.....	+ 19.99	7 35 3.29†
	Sun 2 Limb.....	30.3	44.6	59.1	13.4	27.7	36 59.02		+ 0.30	.....	+ 19.99	7 37 19.31†
	$\alpha$ Leonis.....	.....	14.5	.....	41.7	55.4	59 28.13		+ 0.35	+ 20.00	+ 20.01	9 59 48.49†
	Venus 1 Limb.....	20.1	33.4	47.1	0.5	14.1	37 47.04		+ 0.37	.....	+ 20.02	10 38 7.43†
	Moon 1 Limb.....	54.4	8.0	21.5	35.0	48.6	20 21.50		+ 0.41	.....	+ 20.02	11 20 41.93†
	$\beta$ Leonis.....	4.1	17.8	31.6	.....	59.3	40 31.64		+ 0.34	19.99	+ 20.03	11 40 52.01†
	$\epsilon$ Bootis.....	9.4	24.2	39.4	54.3	9.3	37 39.32		+ 0.26	20.06	+ 20.05	14 37 59.63†
	$\alpha^2$ Libræ.....	13.2	27.0	40.7	54.5	8.4	41 40.76		+ 0.51	20.08	+ 20.05	14 42 1.32†
	$\beta$ Libræ.....	36.1	49.5	3.1	16.4	30.0	8 3.02		+ 0.47	20.07	+ 20.05	15 8 23.54†
	944 Groomb. S. P. ...	29.5	5.0	40.5	16.0	.....	10 40.32		+ 2.48	.....	+ 20.06	17 11 2.86†
	* D. + 32°.8'.....	14.5	30.0	45.6	1.3	17.1	15 45.70		+ 0.24	.....	+ 20.06	17 16 6.00†
	* D. + 34°.39'.....	11.1	27.0	43.2	59.3	15.5	27 43.22		+ 0.22	.....	+ 20.07	17 28 3.51†
	$\delta$ Ursæ Minoris.....	39.5	23.0	7.5	49.7	33.0	24 6.54		- 2.91	.....	+ 20.07	.....†
July 16	Sun 1 Limb.....	17.0	31.4	45.4	59.8	14.2	38 45.56		+ 0.45	.....	+ 20.15	7 39 6.16†
	Sun 2 Limb.....	32.9	47.2	1.4	15.7	30.1	41 1.46		+ 0.45	.....	+ 20.15	7 41 22.06†
	$\alpha$ Ophiuchi.....	43.0	56.5	10.0	23.6	37.2	27 10.06		+ 0.51	+ 20.13	+ 20.22	17 27 30.79†
	$\delta$ Ursæ Minoris .....	41.0	25.0	7.5	50.0	.....	24 7.50		- 4.24	.....	+ 20.22	.....†
	$\alpha$ Lyræ.....	37.5	54.5	11.6	28.4	45.5	31 11.50		+ 0.31	20.27	+ 20.22	18 31 32.03†
	$\beta$ Lyræ.....	18.7	34.5	50.5	6.3	22.2	43 50.44		+ 0.35	20.25	+ 20.22	18 44 11.01†
July 17	$\delta$ Ursæ Minoris .....	40.0	24.0	.....	.....	.....	24 7.05		- 3.33	.....	+ 19.87	.....
	$\alpha$ Lyræ.....	38.2	55.1	12.0	29.1	46.2	31 12.12		+ 0.25	+ 19.71	+ 19.87	18 31 32.24
	$\beta$ Lyræ.....	19.1	34.8	50.8	6.6	22.6	43 50.78		+ 0.29	19.97	+ 19.87	18 44 10.94
	$\zeta$ Aquilæ.....	16.0	29.6	43.5	57.1	10.7	57 43.38		+ 0.42	19.83	+ 19.87	18 58 3.67
	$\delta$ Aquilæ.....	39.3	52.3	5.7	19.0	32.3	17 5.72		+ 0.48	19.78	+ 19.87	19 17 26.07
	$\gamma$ Aquilæ.....	51.8	5.5	18.9	32.5	46.1	38 18.96		+ 0.44	19.98	+ 19.87	19 38 39.27
	$\alpha$ Aquilæ.....	11.6	24.8	38.4	51.7	5.2	42 38.34		+ 0.45	19.96	+ 19.88	19 42 58.67
	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....
July 18	$\alpha$ Ophiuchi.....	43.0	56.6	10.4	24.0	37.6	27 10.32		+ 0.32	+ 20.05	+ 20.06	17 27 30.70
	51 (Hev.) Cephei S. P. ...	7.5	45.0	22.0	0.5	38.5	22 22.70		+ 3.17	.....	+ 20.07	18 22 45.94
	24 Ursæ Minoris.....	47.5	0.0	10.5	21.0	31.0	30 10.00		- 2.40	.....	+ 20.07	18 30 27.67
	$\beta$ Lyræ.....	18.8	34.8	50.9	6.7	22.7	43 50.78		+ 0.22	20.05	+ 20.07	18 44 11.07
	$\zeta$ Aquilæ.....	15.9	29.6	43.3	56.9	10.6	57 43.26		+ 0.32	20.06	+ 20.07	18 58 3.65
	$\delta$ Aquilæ.....	38.9	52.2	5.6	18.8	32.2	17 5.54		+ 0.36	20.09	+ 20.08	19 17 25.98
	$\gamma$ Aquilæ.....	52.0	5.4	19.0	32.5	46.0	38 18.98		+ 0.33	20.08	+ 20.08	19 38 39.39
	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....
July 20	Sun 1 Limb.....	23.4	37.6	52.0	6.2	20.3	54 51.90		+ 0.20	.....	+ 20.58	7 55 12.68
	Sun 2 Limb.....	38.5	.....	7.2	21.3	.....	57 7.08		+ 0.20	.....	+ 20.58	7 57 27.86
	$\alpha$ Ursæ Minoris S. P. ...	7.5	.....	.....	40.0	.....	1 29.30		+ 2.72	.....	+ 20.65	.....
	$\alpha$ Coronæ borealis.....	4.3	19.1	34.0	48.8	3.8	27 34.00		+ 0.18	+ 20.63	+ 20.68	15 27 54.86
	$\alpha$ Serpentis.....	35.5	48.8	2.1	15.4	28.8	36 2.12		+ 0.25	20.69	+ 20.69	15 36 23.06
	$\beta^1$ Scorpii.....	18.7	32.8	47.0	1.1	15.2	55 46.96		+ 0.35	20.64	+ 20.69	15 56 8.00
	$\delta$ Ophiuchi.....	9.8	23.3	36.5	49.8	3.2	5 36.52		+ 0.28	20.75	+ 20.69	16 5 57.49
	Saturn 1 Limb Ring.....	31.7	.....	59.8	.....	28.0	8 59.83		+ 0.35	.....	+ 20.69	16 9 20.87
	Saturn 2 Limb Ring.....	.....	48.5	.....	16.7	.....	9 2.60		+ 0.35	.....	+ 20.69	16 9 23.64
	$\alpha$ Scorpii.....	45.2	0.0	14.7	29.7	44.5	19 14.82		+ 0.38	20.76	+ 20.70	16 19 35.90
	944 Groomb. S. P. ...	31.0	6.0	41.0	16.0	50.5	10 40.90		+ 0.93	.....	+ 20.71	17 11 2.54
	* D. + 34°.52'.....	9.0	25.2	41.5	57.6	13.8	28 41.42		+ 0.15	.....	+ 20.71	17 29 2.28



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instrument.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.	m.	s.		observed.	interpolated.	
July 21	(a) $\beta^1$ Scorpii.....	18.4	32.6	46.5	0.9	14.7	55	46.62	+ 0.44	+ 20.88	+ 20.86	h. m. s. 15 56 7.92
	Saturn 1 Limb Ring.....	.....	38.4	.....	6.6	.....	8	52.50	+ 0.44	.....	+ 20.86	16 9 13.80
	Saturn 2 Limb Ring.....	27.2	.....	55.3	.....	23.5	8	55.33	+ 0.44	.....	+ 20.86	16 9 16.63
	$\alpha$ Scorpii.....	45.2	59.6	14.6	29.4	44.4	19	14.64	+ 0.48	20.83	+ 20.86	16 19 35.98
July 22	Sun 1 Limb.....	.....	.....	51.4	5.6	19.6	2	51.33	+ 0.30	.....	+ 20.79	8 3 12.42
	Sun 2 Limb.....	37.7	52.0	.....	.....	34.6	5	6.17	+ 0.30	.....	+ 20.79	8 5 27.26
	$\alpha$ Bootis.....	31.8	46.0	0.2	14.4	28.5	8	0.18	+ 0.30	+ 20.77	+ 20.77	.....
July 24	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	44.0	56.0	1	33.05	+ 5.36	.....	+ 20.79	13 1 59.20
	$\epsilon$ Bootis.....	8.5	23.6	38.5	53.5	8.6	37	38.54	+ 0.20	+ 20.77	+ 20.79	14 37 59.53
	$\alpha^2$ Libræ.....	12.6	26.3	40.1	53.8	7.7	41	40.10	+ 0.41	20.75	+ 20.79	14 42 1.30
	$\alpha$ Serpentis.....	35.2	48.5	2.0	15.4	28.7	36	1.96	+ 0.30	20.76	+ 20.79	15 36 23.05
	$\delta$ Ophiuchi.....	9.8	23.1	36.5	49.7	3.0	5	36.42	+ 0.35	20.75	+ 20.78	16 5 57.55
	Saturn 1 Limb Ring.....	5.2	.....	33.3	.....	1.3	8	33.27	+ 0.44	.....	+ 20.78	16 8 54.49
	Saturn 2 Limb Ring.....	.....	21.8	.....	49.8	.....	8	35.80	+ 0.44	.....	+ 20.78	16 8 57.02
	$\alpha$ Herculis.....	32.7	46.5	0.2	13.8	27.6	7	0.16	+ 0.26	20.90	+ 20.77	17 7 21.19
	$\lambda$ Sagittarii.....	15.3	30.1	44.8	59.5	14.4	17	44.82	+ 0.48	.....	+ 20.76	18 18 6.06
	51 (Hcv.) Cephei S.P. ....	8.0	.....	24.0	1.5	40.5	22	23.95	+ 3.12	.....	+ 20.76	18 22 47.83
	$\delta$ Ursæ Minoris.....	.....	23.0	7.5	.....	.....	24	6.90	- 2.16	.....	+ 20.76	18 24 25.50
	24 Ursæ Minoris.....	46.0	56.0	8.5	19.0	29.0	30	7.70	- 2.45	.....	+ 20.76	18 30 26.01
	Groomb. 1119 S.P. ....	22.5	46.5	12.5	37.5	1.0	41	12.00	+ 8.64	.....	+ 20.75	18 41 41.39
	$\sigma$ Sagittarii.....	29.9	44.8	59.7	14.6	29.4	44	59.68	+ 0.49	.....	+ 20.75	18 45 20.92
July 25	Sun 2 Limb.....	.....	.....	1.1	15.2	29.3	17	1.05	+ 0.15	.....	+ 20.59	8 17 21.79
	$\alpha$ Ursæ Minoris S. P. ....	10.0	22.5	32.5	45.0	56.0	1	33.20	+ 3.04	.....	+ 20.54	13 1 56.78
	$\alpha$ Lyræ.....	37.4	54.6	11.6	28.6	45.5	31	11.54	+ 0.09	+ 20.43	+ 20.47	18 31 32.10
	$\zeta$ Aquilæ.....	15.7	29.3	43.1	56.5	.....	57	42.98	+ 0.17	20.51	+ 20.48	18 58 3.63
July 26	Sun 1 Limb.....	15.9	29.6	44.0	58.0	12.1	18	43.92	+ 0.16	.....	+ 20.85	8 19 4.93
	Sun 2 Limb.....	29.7	43.6	57.8	12.0	26.2	20	57.86	+ 0.16	.....	+ 20.85	8 21 18.87
	12 Canum Venat. ....	35.7	52.8	9.8	27.0	44.2	48	9.90	+ 0.08	+ 20.97	+ 20.97	.....
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	32.0	.....	.....	1	32.30	+ 4.16	.....	+ 20.97	.....
July 27	Venus 1 Limb.....	10.2	23.7	37.0	50.2	3.7	20	36.96	+ 0.30	.....	+ 20.98	11 20 58.24
	$\beta$ Leonis.....	3.2	16.8	30.6	44.5	58.3	40	30.68	+ 0.25	+ 20.96	+ 20.98	11 40 51.91
	12 Canum Venat. ....	35.6	52.5	9.7	26.9	44.1	48	9.76	+ 0.13	21.05	+ 20.98	12 48 30.87
	Mars 1 Limb.....	43.4	56.4	10.1	23.6	37.0	0	10.10	+ 0.36	.....	+ 20.98	13 0 31.44
	$\alpha$ Ursæ Minoris S. P. ....	10.5	22.5	33.0	44.5	56.0	1	33.30	+ 5.72	.....	+ 20.98	13 2 0.00
	$\alpha$ Herculis.....	32.4	46.4	0.0	13.6	27.6	7	0.00	+ 0.25	21.05	+ 20.99	17 7 21.24
	$\alpha$ Ophiuchi.....	42.2	55.6	9.4	23.1	36.6	27	9.38	+ 0.26	21.01	+ 20.99	17 27 30.63
	$\delta$ Ursæ Minoris.....	.....	21.0	.....	.....	.....	24	4.60	- 2.34	.....	+ 20.99	18 24 23.25
	$\alpha$ Lyræ.....	37.1	53.9	11.0	28.2	45.3	31	11.10	+ 0.13	20.81	+ 20.99	18 31 32.22
July 29	Sun 1 Limb.....	3.8	.....	.....	45.9	59.8	30	31.81	+ 0.23	.....	+ 21.15	8 30 53.19
	Sun 2 Limb.....	17.2	31.4	45.5	59.7	13.8	32	45.52	+ 0.23	.....	+ 21.15	8 33 6.90
INSTRUMENT REVERSED.												
	Venus 1 Limb.....	51.5	4.7	18.1	31.2	44.7	27	18.04	+ 0.17	.....	+ 21.16	11 27 39.37
	12 Canum Venat. ....	35.5	52.7	9.8	27.0	44.1	48	9.82	- 0.10	+ 21.18	+ 21.17	12 48 30.89
	$\alpha$ Ursæ Minoris S. P. ....	58.5	10.5	22.0	.....	.....	1	21.63	+ 16.58	.....	+ 21.17	.....
	$\alpha$ Herculis.....	32.4	46.3	59.8	13.6	27.5	6	59.92	+ 0.10	21.27	+ 21.19	17 7 21.21
	$\alpha$ Ophiuchi.....	42.2	55.7	9.5	23.1	36.7	27	9.44	+ 0.11	21.10	+ 21.20	17 27 30.75
	$\beta$ Geminorum.....	36.8	51.9	7.1	22.3	37.4	35	7.10	- 0.08	+ 21.34	+ 21.35	7 35 28.37
July 30	Sun 1 Limb.....	58.8	13.0	27.0	41.0	55.0	34	26.96	- 0.03	.....	+ 21.37	8 34 48.30
(a) July 21. at 12 <sup>h</sup> . Applied four pieces of brass to the jar of the pendulum.												

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
July 30	Sun 2 Limb .....	<i>s.</i> 12.2	<i>s.</i> 26.1	<i>s.</i> 40.1	<i>s.</i> 54.2	<i>s.</i> 8.3	<i>m.</i> 36	<i>s.</i> 40.18	— 0.03	<i>s.</i> .....	<i>s.</i> +21.37	<i>h. m. s.</i> 8 37 1.52
	Mercury 1 Limb.....	51.3	4.7	18.2	31.8	45.3	19	18.26	+ 0.01	.....	+21.38	10 19 39.65
	Venus 1 Limb.....	8.8	22.0	35.4	48.7	2.1	30	35.40	+ 0.03	.....	+21.40	11 30 56.83
	$\beta$ Leonis.....	2.9	16.7	30.5	44.4	58.1	40	30.52	— 0.02	+21.37	+21.40	11 40 51.90
	12 Canum Venat. ....	35.3	52.5	9.7	26.8	43.9	48	9.64	— 0.16	21.41	+21.41	12 48 30.89
	$\alpha$ Ursæ Minoris S. P. ....	.....	12.0	24.0	36.0	47.5	1	24.20	+13.13	.....	+21.41	13 1 58.74
	$\eta$ Bootis.....	13.5	27.6	41.6	55.8	9.8	46	41.66	— 0.03	21.38	+21.42	13 47 3.05
	$\alpha$ Bootis .....	31.6	45.6	59.7	13.8	28.0	7	59.74	— 0.04	21.45	+21.42	14 8 21.12
	$\delta$ Ophiuchi .....	9.4	22.6	35.8	49.2	2.6	5	35.92	+ 0.06	21.49	+21.44	16 5 57.42
	51 (Hev.) Cephei S.P. ....	8.0	45.0	24.5	2.0	.....	22	23.92	+ 7.52	.....	+21.47	18 22 52.91
	$\delta$ Ursæ Minoris.....	36.0	20.0	.....	.....	.....	24	3.10	— 5.67	.....	+21.47	18 24 18.90
	24 Ursæ Minoris.....	.....	53.5	5.5	.....	26.5	30	4.90	— 6.41	.....	+21.47	18 30 19.96
Aug. 1	Sun 1 Limb.....	46.6	0.5	14.6	28.6	42.7	42	14.60	+ 0.01	.....	+21.84	8 42 36.45
	Sun 2 Limb.....	59.7	13.8	27.8	41.8	55.8	44	27.78	+ 0.01	.....	+21.84	8 44 49.63
	Venus 1 Limb.....	.....	.....	.....	17.0	30.4	37	3.72	+ 0.09	.....	+21.86	11 37 25.67
	$\zeta$ Aquilæ.....	14.5	27.9	41.6	55.6	.....	57	41.73	+ 0.03	+21.90	+21.94	18 58 3.70
	$\delta$ Aquilæ.....	37.4	50.8	4.1	17.5	30.7	17	4.10	+ 0.09	21.87	+21.94	19 17 26.13
	$\gamma$ Aquilæ.....	.....	.....	17.4	31.0	44.4	38	17.44	+ 0.05	21.98	+21.94	19 38 39.43
	$\alpha$ Aquilæ.....	9.8	23.5	36.7	50.2	3.6	42	36.76	+ 0.06	22.03	+21.94	19 42 58.76
Aug. 2	Sun 1 Limb.....	39.6	53.7	7.7	21.8	35.8	46	7.72	+ 0.05	.....	+21.88	8 46 29.65
	Sun 2 Limb.....	.....	.....	.....	.....	48.8	48	20.81	+ 0.05	.....	+21.88	8 48 42.74
	51 (Hev.) Cephei S.P. ....	5.5	42.5	22.0	58.5	.....	22	21.18	+ 9.71	.....	+21.84	18 22 52.73
	$\delta$ Ursæ Minoris.....	37.5	21.0	6.0	.....	.....	24	4.97	— 7.26	.....	+21.84	.....
	24 Ursæ Minoris.....	46.5	58.5	9.0	19.0	31.0	30	8.80	— 8.19	.....	+21.84	18 30 22.45
	$\alpha$ Lyrae.....	.....	53.3	10.4	27.4	44.2	31	10.32	— 0.13	+21.81	+21.84	18 31 32.03
	Groomb. 1119 S. P. ....	.....	44.0	7.5	27.5	51.0	41	6.10	+27.48	.....	+21.84	18 41 55.42
	$\beta$ Lyrae.....	17.5	33.3	49.2	5.1	21.1	43	49.24	— 0.07	21.83	+21.84	18 44 11.01
	$\zeta$ Aquilæ.....	14.4	28.1	41.7	55.4	9.2	57	41.76	+ 0.07	21.83	+21.84	18 58 3.67
	$\delta$ Aquilæ.....	37.5	50.7	4.1	17.3	30.5	17	4.02	+ 0.14	21.90	+21.85	19 17 26.01
	Moon 2 Limb.....	3.7	18.4	33.1	47.9	2.8	12	33.18	— 0.02	.....	+22.05	3 12 55.21
	$\eta$ Tauri.....	6.5	20.7	35.2	49.7	4.5	37	35.32	— 0.02	+22.06	+22.06	.....
	37 Tauri.....	22.4	36.6	50.8	5.2	19.6	54	50.92	— 0.01	.....	+22.06	3 55 12.97
Aug. 3	Moon 2 Limb .....	39.8	55.0	10.2	25.5	40.8	15	10.26	— 0.05	.....	+22.40	4 15 32.61
	$\alpha$ Tauri.....	52.9	6.7	20.6	34.4	48.4	26	20.60	+ 0.03	+22.33	+22.41	4 26 43.04
	$\alpha$ Aurigæ.....	49.7	8.8	27.8	46.9	6.0	4	27.84	— 0.23	22.49	+22.41	5 4 50.02
Aug. 5	Sun 2 Limb.....	.....	41.2	55.3	.....	.....	55	55.22	+ 0.02	.....	+22.83	8 56 18.07
	Venus 1 Limb.....	.....	.....	.....	48.0	1.2	49	34.63	+ 0.12	.....	+22.87	11 49 57.62
	$\eta$ Bootis.....	11.6	26.0	39.9	54.1	8.3	46	39.98	+ 0.01	+22.94	+22.89	13 47 2.88
	$\alpha$ Coronæ borealis.....	1.9	16.8	31.8	46.7	1.7	27	31.78	— 0.05	22.85	+22.92	15 27 54.65
	$\alpha$ Serpentis .....	33.2	46.6	59.9	13.3	26.7	35	59.94	+ 0.08	22.87	+22.92	15 36 22.94
	$\delta$ Aquilæ.....	36.4	49.6	2.8	16.1	29.5	17	2.88	+ 0.11	23.07	+22.93	19 17 25.92
	$\gamma$ Aquilæ.....	49.5	3.0	16.4	29.9	43.4	38	16.44	+ 0.06	22.98	+22.93	19 38 39.43
Aug. 7	Sun 1 Limb.....	.....	9.7	23.8	37.7	51.7	5	23.78	0.00	.....	+22.78	9 5 46.56
	Sun 2 Limb.....	8.0	22.1	35.8	49.7	3.7	7	35.86	0.00	.....	+22.78	9 7 58.64
	$\beta$ Libræ .....	33.4	47.0	0.5	14.0	27.5	8	0.48	+ 0.13	+22.72	+22.76	15 8 23.37
	$\alpha$ Coronæ borealis ....	2.2	16.8	31.8	46.9	1.8	27	31.90	— 0.07	22.72	+22.76	15 27 54.59
	$\alpha$ Herculis.....	31.0	44.7	58.5	12.3	25.9	6	58.48	+ 0.02	22.69	+22.75	17 7 21.25
	$\alpha$ Ophiuchi.....	40.5	54.2	7.8	21.4	34.9	27	7.76	+ 0.03	22.78	+22.75	17 27 30.54
	51 (Hev.) Cephei S. P. ....	7.0	45.5	23.0	1.0	39.0	22	23.10	+ 8.61	.....	+22.76	18 22 54.47
	$\delta$ Ursæ Minoris .....	34.5	19.0	1.0	.....	.....	24	1.67	— 6.48	.....	+22.76	.....
	24 Ursæ Minnris.....	42.0	54.0	4.0	14.5	25.5	30	4.00	— 7.31	.....	+22.76	18 30 19.45
	Groomb. 1119 S. P. ....	27.0	55.5	17.5	.....	.....	41	15.50	+24.41	.....	+22.76	18 42 2.67
	$\beta$ Lyrae .....	16.4	32.5	48.2	4.1	19.9	43	48.22	— 0.10	22.84	+22.76	18 44 10.88



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
Aug. 8	Sun 1 Limb.....	45.3	59.3	13.2	27.1	41.1	9 13.20	+ 0.04	.....	+22.87	9 9 36.11
	Mercury 1 Limb.....	15.8	29.2	42.5	55.8	9.1	51 42.48	+ 0.10	.....	+22.88	10 52 5.46
	$\beta$ Leonis.....	1.2	15.1	28.8	42.7	56.6	40 28.88	+ 0.04	+22.91	+22.89	11 40 51.81
	12 Canum Venat.....	33.7	50.8	8.0	25.1	42.3	48 7.98	- 0.13	22.91	+22.89	12 48 30.74
	$\alpha$ Ursæ Minoris S. P.	4.0	16.0	26.5	39.0	50.0	1 27.10	+15.81	.....	+22.90	13 2 5.81
	Mars 1 Limb.....	4.3	17.8	31.5	44.8	58.5	26 31.38	+ 0.17	.....	-22.90	13 26 54.45
	$\alpha$ Coronæ borealis....	1.8	16.7	31.6	46.6	1.6	27 31.66	- 0.04	22.91	+22.92	15 27 54.54
	$\alpha$ Serpentis.....	33.2	46.5	59.8	13.3	26.7	35 59.90	+ 0.09	22.86	+22.92	15 36 22.91
	$\alpha$ Herculis.....	30.6	44.5	58.3	11.9	25.6	6 58.18	+ 0.05	22.95	+22.94	17 7 21.17
	$\delta$ Ursæ Minoris.....	34.0	18.5	59.0	.....	28.0	24 0.80	- 6.77	.....	+22.96	18 24 16.99
	Groomb. 1119 S. P..	32.5	2.0	23.0	45.0	9.0	41 22.30	+25.65	.....	+22.97	18 42 10.92
Aug. 9	12 Canum Venat. ....	33.6	50.6	7.8	24.9	42.1	48 7.80	- 0.12	+23.07	+23.24	12 48 30.92
	$\alpha$ Ursæ Minoris S. P.	5.0	17.0	.....	40.0	.....	1 28.43	+15.82	.....	+23.25	.....
	$\alpha$ Coronæ borealis....	1.5	16.4	31.3	46.2	1.0	27 31.28	- 0.03	23.27	+23.28	15 27 54.53
	$\alpha$ Ophiuchi.....	40.0	53.7	7.2	20.9	34.6	27 7.28	+ 0.08	23.19	+23.31	17 27 30.67
	$\alpha$ Lyrae.....	34.2	51.2	8.4	25.5	42.6	31 8.38	- 0.12	23.66	+23.33	18 31 31.59
	$\zeta$ Aquilæ.....	12.8	26.6	40.3	54.1	7.6	57 40.28	+ 0.07	23.29	+23.34	18 58 3.69
Aug. 10	Sun 1 Limb.....	.....	.....	.....	4.0	18.0	16 50.24	+ 0.08	.....	+23.56	9 17 13.88
Aug. 12	$\alpha$ Ophiuchi.....	38.7	52.4	6.0	19.6	33.2	27 5.98	+ 0.13	+24.40	+24.46	17 27 30.57
	$\delta$ Ursæ Minoris.....	31.5	15.5	0.5	.....	25.0	23 59.02	- 7.04	.....	+24.47	.....
	Groomb. 1119 S. P..	34.0	56.0	17.0	38.5	2.0	41 17.50	+26.93	.....	+24.48	18 42 8.91
	$\beta$ Lyrae.....	14.3	30.4	46.4	2.2	18.1	43 46.28	- 0.02	24.65	+24.48	18 44 10.74
	$\zeta$ Aquilæ.....	11.6	25.4	39.2	52.7	6.4	57 39.06	+ 0.12	24.44	+24.48	18 58 3.66
	$\gamma$ Aquilæ.....	47.8	1.3	15.0	28.5	41.8	38 14.88	+ 0.14	24.45	+24.50	19 38 39.52
	$\beta$ Aquilæ.....	36.2	49.5	2.9	16.3	29.6	47 2.90	+ 0.16	24.45	+24.51	19 47 27.57
Aug. 13	Sun 1 Limb.....	43.3	57.2	.....	.....	.....	28 10.92	- 0.06	.....	+24.92	9 28 35.78
	$\delta$ Ursæ Minoris.....	.....	10.0	55.0	42.0	.....	23 55.67	- 4.57	.....	+25.20	.....
	$\alpha$ Lyrae.....	32.7	49.8	7.0	24.0	40.9	31 6.88	- 0.16	+25.14	+25.21	18 31 31.93
	$\beta$ Lyrae.....	13.9	30.1	45.8	1.6	17.5	43 45.78	- 0.13	25.25	+25.21	18 44 10.86
	$\gamma$ Aquilæ.....	47.3	0.8	14.2	27.8	41.3	38 14.28	- 0.05	25.24	+25.24	19 38 39.47
	$\alpha$ Aquilæ.....	6.7	20.1	33.6	47.1	0.4	42 33.58	- 0.04	25.32	+25.24	19 42 58.78
	$\beta$ Aquilæ.....	35.5	49.0	2.3	15.7	29.2	47 2.34	- 0.04	25.21	+25.24	19 47 27.54
Aug. 18	(a) Moon 1 Limb.....	1.7	17.0	32.4	48.0	3.7	32 32.56	+ 0.23	.....	+27.52	16 33 0.31
	$\alpha$ Herculis.....	26.1	39.7	53.4	7.3	21.0	6 53.50	+ 0.08	+27.47	+27.53	17 7 21.11
	$\theta$ Ophiuchi.....	13.6	28.3	43.0	57.7	12.4	11 43.00	+ 0.23	.....	+27.53	17 12 10.76
	$\alpha$ Lyrae.....	30.2	47.2	4.1	21.2	38.3	31 4.20	- 0.07	27.66	+27.56	18 31 31.69
	$\beta$ Lyrae.....	11.6	27.5	43.3	59.2	15.1	43 43.34	- 0.03	27.53	+27.56	18 44 10.87
Aug. 19	$\delta$ Ursæ Minoris.....	24.0	11.0	54.0	.....	.....	23 53.23	- 6.94	.....	+27.92	.....
	$\alpha$ Lyrae.....	29.8	46.8	3.8	.....	.....	31 3.80	+ 0.03	+27.95	+27.92	18 31 31.75
	$\zeta$ Aquilæ.....	8.3	21.7	35.5	49.1	2.7	57 35.46	+ 0.22	27.90	+27.93	18 58 3.61
	$\delta$ Aquilæ.....	31.3	44.5	57.8	11.2	24.4	16 57.84	+ 0.29	27.89	+27.93	19 17 26.06
	$\alpha$ Aquilæ.....	3.8	17.2	30.6	44.1	57.5	42 30.64	+ 0.26	27.95	+27.94	19 42 58.84
	$\beta$ Aquilæ.....	32.5	45.8	59.3	12.6	26.1	46 59.26	+ 0.26	27.98	+27.95	19 47 27.47
Aug. 20	Sun 1 Limb.....	51.1	5.0	19.1	32.9	46.5	54 18.92	+ 0.01	.....	+28.42	9 54 47.35
	Sun 2 Limb.....	1.7	15.6	29.3	43.0	56.8	56 29.28	+ 0.01	.....	+28.42	9 56 57.71
	$\alpha$ Herculis.....	25.0	38.5	52.3	6.2	20.0	6 52.40	0.00	+28.62	+28.65	17 7 21.05
	$\alpha$ Ophiuchi.....	34.6	48.3	1.8	15.3	29.1	27 1.82	+ 0.01	28.59	+28.66	17 27 30.49
	$\delta$ Ursæ Minoris.....	22.0	5.0	48.5	36.5	.....	23 49.75	- 4.51	.....	+28.70	.....
	Moon 1 Limb.....	19.3	34.9	50.5	6.2	21.8	28 50.54	+ 0.11	.....	+28.70	18 29 19.35
	$\sigma$ Sagittarii.....	22.1	36.7	51.5	6.5	21.3	44 51.62	+ 0.09	.....	+28.71	18 45 20.42
	$\tau$ Sagittarii.....	58.1	12.8	28.1	43.2	58.0	56 28.04	+ 0.09	.....	+28.71	18 56 56.84
(a) Very faint.											

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.	
		I.	II.	III.	IV.	V.			observed.	interpo- lated.		
Aug. 20	$\delta$ Aquilæ.....	30.5	44.1	57.2	10.4	23.8	16	57.20	+ 0.04	+28.77	+28.72	19 17 25.96
	$\gamma$ Aquilæ.....	43.6	57.2	10.6	24.2	37.7	38	10.66	+ 0.01	28.77	+28.72	19 38 39.39
	$\alpha$ Aquilæ.....	3.1	16.5	30.1	43.4	57.0	42	30.02	+ 0.02	28.80	+28.72	19 42 58.76
	$\beta$ Aquilæ.....	32.2	45.4	58.7	12.1	25.4	46	58.76	+ 0.02	28.72	+28.72	19 47 27.50
Aug. 21	Sun 1 Limb.....	33.6	47.2	1.0	14.6	28.2	58	0.92	+ 0.20	.....	+28.91	9 58 30.03
	Sun 2 Limb.....	43.7	57.3	11.0	24.6	38.2	0	10.96	+ 0.20	.....	+28.91	10 0 40.07
	Venus 1 Limb.....	15.0	28.4	41.7	55.1	8.6	32	41.76	+ 0.32	.....	+28.94	12 33 11.02
	12 Canum Venat. ....	27.6	44.6	1.8	19.0	36.0	48	1.80	- 0.01	+28.81	+28.95	12 48 30.74
	$\alpha$ Ursæ Minoris S. P.	7.5	17.5	29.0	40.0	52.5	1	29.30	+17.07	.....	+28.95	.....
	$\alpha$ Serpentis.....	26.6	40.1	53.4	6.8	20.3	35	53.44	+ 0.24	28.99	+28.99	15 36 22.67
	$\delta$ Aquilæ.....	30.1	43.3	56.6	9.8	23.1	16	56.58	+ 0.27	29.16	+29.05	19 17 25.90
	$\gamma$ Aquilæ.....	43.3	56.6	10.2	23.7	37.2	38	10.20	+ 0.22	29.02	+29.06	19 38 39.48
Aug. 22	$\alpha$ Aquilæ.....	2.6	16.2	29.5	43.1	56.4	42	29.56	+ 0.23	29.05	+29.06	19 42 58.85
	Sun 1 Limb.....	15.1	28.7	42.3	56.1	9.6	1	42.36	+ 0.22	.....	+29.35	10 2 11.93
	Sun 2 Limb.....	24.8	38.5	51.9	5.7	19.5	3	52.08	+ 0.22	.....	+29.35	10 4 21.65
	$\alpha$ Ursæ Minoris S. P.	.....	.....	.....	40.0	.....	1	28.30	+17.83	.....	+29.42	.....
Aug. 24	$\alpha$ Lyræ.....	28.2	.....	2.2	.....	.....	31	2.20	0.00	+29.53	+29.53	.....
	$\alpha$ Serpentis.....	25.2	38.7	52.1	5.5	18.8	35	52.06	+ 0.08	+30.49	+30.59	15 36 22.73
	$\delta$ Ursæ Minoris.....	.....	.....	48.0	32.0	13.5	23	47.67	- 5.79	.....	+30.65	.....
	$\beta$ Lyræ.....	8.5	24.4	40.2	56.1	12.0	43	40.24	- 0.06	30.57	+30.66	18 44 10.84
	$\alpha$ Aquilæ.....	1.3	14.5	28.1	41.5	54.9	42	28.06	+ 0.08	30.68	+30.67	19 42 58.81
	$\beta$ Aquilæ.....	29.9	43.3	56.7	10.1	23.4	46	56.68	+ 0.08	30.72	+30.67	19 47 27.43
	$\alpha^2$ Capricorni.....	12.4	26.3	39.7	53.3	7.0	8	39.74	+ 0.15	30.82	+30.68	20 9 10.57
	Uranus.....	58.1	.....	.....	37.8	51.4	5	24.64	+ 0.13	.....	+30.71	23 5 55.48
Aug. 26	Sun 1 Limb.....	.....	.....	.....	37.9	51.4	16	24.33	+ 0.19	.....	+31.11	10 16 55.63
	Sun 2 Limb.....	.....	20.0	.....	.....	.....	18	33.54	+ 0.19	.....	+31.11	10 19 4.84
	Venus 1 Limb.....	43.7	57.3	10.8	24.4	37.8	43	10.80	+ 0.31	.....	+31.14	12 43 42.25
	12 Canum Venat. ....	25.3	42.4	59.6	16.6	33.7	47	59.52	- 0.05	+31.08	+31.14	12 48 30.61
	$\alpha$ Ursæ Minoris S. P.	.....	.....	.....	.....	53.5	1	29.60	+18.16	.....	+31.14	13 2 18.90
	$\alpha$ Coronæ borealis ...	53.1	8.1	23.0	37.8	52.8	27	22.96	+ 0.06	31.20	+31.17	15 27 54.19
	$\alpha$ Serpentis.....	24.4	37.7	51.2	4.6	18.0	35	51.18	+ 0.21	31.21	+31.17	15 36 22.56
	$\delta$ Ursæ Minoris.....	21.5	5.5	48.5	32.5	16.0	23	48.80	- 7.65	.....	+31.22	18 24 12.37
	$\beta$ Lyræ.....	7.7	23.5	39.5	55.5	11.3	43	39.50	+ 0.02	31.20	+31.22	18 44 10.74
	$\zeta$ Aquilæ.....	4.7	18.5	32.2	45.7	59.5	57	32.12	+ 0.17	31.21	+31.23	18 58 3.52
	$\lambda$ Piscium.....	55.4	8.6	21.8	35.1	48.4	33	21.86	+ 0.25	.....	+31.31	23 33 53.42
	29 Piscium.....	39.6	53.0	6.3	19.6	33.0	53	6.30	+ 0.28	.....	+31.31	23 53 37.89
	Moon 2 Limb.....	54.7	8.4	22.1	35.7	49.3	6	22.04	+ 0.26	.....	+31.32	0 6 53.62
	$\delta$ Piscium.....	25.0	38.4	51.7	5.2	18.5	39	51.76	+ 0.21	.....	+31.32	0 40 23.29
Aug. 27	Venus 1 Limb.....	36.4	49.8	3.3	16.8	30.3	45	3.32	+ 0.30	.....	+31.54	12 45 35.16
	12 Canum Venat. ....	24.8	41.8	59.0	16.2	33.4	47	59.04	- 0.05	+31.55	+31.54	12 48 30.53
	$\alpha$ Serpentis.....	24.1	37.5	50.8	4.4	17.7	35	50.90	+ 0.20	31.49	+31.58	15 36 22.68
	$\beta$ Lyræ.....	7.2	23.3	39.1	54.7	10.7	43	39.00	+ 0.01	31.70	+31.65	18 44 10.66
	$\zeta$ Aquilæ.....	4.4	17.8	31.5	45.3	58.9	57	31.58	+ 0.17	31.74	+31.65	18 58 3.40
	$\delta$ Aquilæ.....	27.6	40.8	54.2	7.4	20.7	16	54.14	+ 0.24	31.58	+31.66	19 17 26.04
	Uranus.....	31.0	44.4	58.0	11.3	24.6	4	57.86	+ 0.29	.....	+31.74	23 5 29.89
Aug. 29	$\alpha$ Ophiuchi.....	30.4	43.8	57.4	11.2	24.6	26	57.48	+ 0.17	+32.64	+32.69	17 27 30.34
	$\delta$ Ursæ Minoris.....	18.5	2.0	45.0	29.0	12.5	23	45.40	- 7.49	.....	+32.71	.....
	$\zeta$ Aquilæ.....	3.4	17.1	30.5	44.3	57.8	57	30.62	+ 0.17	32.68	+32.73	18 58 3.52
	$\gamma$ Aquilæ.....	39.4	52.9	6.5	19.8	33.4	38	6.40	+ 0.19	32.80	+32.74	19 38 39.33
	$\alpha$ Aquilæ.....	59.0	12.5	25.9	39.3	52.6	42	25.86	+ 0.20	32.73	+32.74	19 42 58.80
	$\beta$ Aquilæ.....	27.7	41.1	54.5	7.8	21.2	46	54.46	+ 0.21	32.79	+32.74	19 47 27.41



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Aug. 30	Sun 1 Limb .....	32.4	45.7	59.5	13.0	26.7	30	59.46	+ 0.19	.....	+ 33.03	10 31 32.68
	Sun 2 Limb .....	41.2	54.7	8.3	21.7	35.3	33	8.24	+ 0.19	.....	+ 33.03	10 33 41.46
	$\beta$ Leonis.....	51.0	5.0	18.5	32.4	46.4	40	18.66	+ 0.15	+ 32.98	+ 33.06	11 40 51.87
	$\alpha$ Ursæ Minoris S. P. ....	5.0	.....	.....	.....	54.0	1	29.50	+ 17.78	.....	+ 33.08	13 2 20.36
	$\alpha$ Herculis.....	20.1	33.7	47.5	1.4	15.1	6	47.56	+ 0.16	33.15	+ 33.16	17 7 20.88
	$\delta$ Ursæ Minoris .....	17.5	1.0	44.5	28.0	.....	23	44.52	- 7.49	.....	+ 33.18	18 24 10.21
	$\beta$ Lyræ.....	5.7	21.4	37.3	53.2	9.2	43	37.36	+ 0.01	33.29	+ 33.19	18 44 10.56
Aug. 31	$\delta$ Ursæ Minoris.....	16.0	0.0	43.5	26.5	11.0	23	43.40	- 7.18	.....	+ 33.62	.....
	$\beta$ Lyræ .....	5.3	21.2	37.1	53.0	8.8	43	37.08	0.00	+ 33.56	+ 33.62	18 44 10.70
	$\zeta$ Aquilæ .....	2.4	16.0	29.7	43.4	57.1	57	29.72	+ 0.15	33.57	+ 33.63	18 58 3.50
	$\delta$ Aquilæ.....	25.5	38.8	52.1	5.4	18.7	16	52.10	+ 0.22	33.61	+ 33.63	19 17 25.95
	$\gamma$ Aquilæ .....	38.5	52.1	5.5	19.1	32.5	38	5.54	+ 0.17	33.66	+ 33.63	19 38 39.34
	$\alpha$ Aquilæ .....	57.9	11.4	25.0	38.3	51.7	42	24.86	+ 0.18	33.73	+ 33.63	19 42 58.67
	$\alpha$ Aurigæ .....	29.6	58.7	17.7	36.8	56.0	4	17.76	- 0.13	+ 33.67	+ 33.68	5 4 51.31
Sept. 1	$\beta$ Orionis.....	49.4	2.8	16.3	29.5	43.2	6	16.24	+ 0.25	33.69	+ 33.68	5 6 50.17
	$\beta$ Tauri .....	5.8	20.8	36.0	51.1	6.3	15	36.00	+ 0.04	33.61	+ 33.68	5 16 9.72
	$\delta$ Orionis .....	48.5	1.8	15.3	28.4	41.6	23	15.12	+ 0.21	33.71	+ 33.68	5 23 49.01
	$\epsilon$ Orionis.....	4.4	17.5	30.7	44.1	57.4	27	30.82	+ 0.22	33.72	+ 33.68	5 28 4.72
	136 Tauri .....	11.4	26.5	41.4	56.3	11.4	42	41.40	+ 0.05	.....	+ 33.67	5 43 15.12
	Moon 2 Limb .....	12.3	27.8	43.4	58.9	14.5	5	43.38	+ 0.06	.....	+ 33.67	6 6 17.11
	$\delta$ Ursæ Minoris S. P. ....	1.0	44.5	28.5	11.5	55.5	23	28.20	+ 7.42	.....	+ 33.66	6 24 9.28
Sept. 2	$\epsilon$ Geminorum .....	0.5	15.1	29.6	44.5	59.2	33	29.78	+ 0.06	.....	+ 33.66	6 34 3.50
	$\alpha$ Herculis.....	19.9	33.5	47.4	1.1	14.8	6	47.34	+ 0.13	+ 33.35	+ 33.44	17 7 20.91
	$\alpha$ Ophiuchi.....	29.6	43.2	56.6	10.4	23.8	26	56.72	+ 0.14	33.37	+ 33.43	17 27 30.29
	$\delta$ Ursæ Minoris.....	16.0	59.0	42.0	27.0	10.0	23	42.80	- 6.70	.....	+ 33.40	18 24 9.50
	$\beta$ Lyræ.....	5.5	21.4	37.3	53.1	8.9	43	37.24	+ 0.01	33.35	+ 33.39	18 44 10.64
	$\zeta$ Aquilæ .....	2.6	16.2	29.7	43.5	57.3	57	29.86	+ 0.14	33.42	+ 33.38	18 58 3.38
	$\delta$ Aquilæ.....	25.6	38.8	52.3	5.6	18.8	16	52.22	+ 0.20	33.49	+ 33.37	19 17 25.79
Sept. 3	Uranus.....	36.8	50.2	3.5	16.8	30.3	4	3.52	+ 0.24	.....	+ 33.24	23 4 37.00
	$\delta$ Ursæ Minoris S. P. ....	1.0	45.0	28.5	12.0	56.0	23	28.50	+ 7.78	.....	+ 32.90	6 24 9.18
	$\omega^1$ Geminorum .....	.....	50.5	5.1	.....	34.2	52	5.07	+ 0.09	.....	+ 32.89	6 52 38.05
	Moon 2 Limb .....	51.4	6.7	22.1	37.5	52.7	9	22.08	+ 0.08	.....	+ 32.87	7 9 55.03
	$\nu$ Geminorum .....	58.8	13.7	28.6	43.6	58.5	25	28.64	+ 0.06	.....	+ 32.86	7 26 1.56
	$\alpha$ Canis Minoris .....	53.8	7.4	20.5	33.9	47.4	30	20.60	+ 0.21	+ 32.91	+ 32.85	7 30 53.66
	$\beta$ Geminorum.....	26.1	41.2	56.2	11.4	26.5	34	56.28	+ 0.06	32.85	+ 32.85	7 35 29.19
Sept. 4	Sun 1 Limb .....	4.9	18.3	31.8	45.3	58.7	45	31.80	+ 0.20	.....	+ 32.70	10 46 4.70
	Sun 2 Limb .....	13.4	26.8	40.2	53.7	7.2	47	40.26	+ 0.20	.....	+ 32.70	10 48 13.16
	12 Canum Venat.....	23.5	40.7	57.8	15.0	32.3	47	57.86	- 0.04	32.66	+ 32.60	12 48 30.42
	Venus 1 Limb.....	21.2	35.1	48.8	2.4	15.8	55	48.66	+ 0.29	.....	+ 32.59	12 56 21.54
	$\alpha$ Ursæ Minoris S. P. ....	9.0	.....	32.0	.....	56.0	1	32.20	+ 16.69	.....	+ 32.59	13 2 21.48
	$\beta$ Lyræ.....	6.6	22.5	38.3	54.2	10.1	43	38.34	+ 0.02	32.23	+ 32.28	18 44 10.64
	$\zeta$ Aquilæ.....	3.7	17.4	31.1	44.5	58.3	57	31.00	+ 0.16	32.24	+ 32.27	18 58 3.43
Sept. 5	$\delta$ Aquilæ.....	26.6	40.1	53.4	6.7	20.0	16	53.36	+ 0.23	32.30	+ 32.26	19 17 25.85
	$\gamma$ Aquilæ.....	39.9	53.4	6.8	20.4	34.0	38	6.90	+ 0.18	32.25	+ 32.24	19 38 39.32
	Uranus.....	29.2	42.6	56.1	9.5	22.8	3	56.04	+ 0.27	.....	+ 32.05	23 4 28.36
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+ 16.30	.....	+ 31.05	13 2 22.85
	$\eta$ Bootis.....	3.5	17.4	31.4	45.4	59.5	46	31.44	+ 0.11	+ 31.04	+ 31.01	13 47 2.56
	$\alpha$ Herculis.....	22.4	36.2	49.7	3.5	17.3	6	49.82	+ 0.14	30.83	+ 30.87	17 7 20.83
	$\alpha$ Ophiuchi.....	32.0	45.5	59.3	12.8	26.5	26	59.22	+ 0.15	30.82	+ 30.86	17 27 30.23
Sept. 6	$\delta$ Ursæ Minoris.....	17.5	1.5	44.0	28.0	11.0	23	44.40	- 6.86	.....	+ 30.82	18 24 8.36
	$\beta$ Lyræ.....	7.9	23.8	39.6	55.6	11.6	43	39.70	+ 0.01	30.86	+ 30.81	18 44 10.52
	$\zeta$ Aquilæ.....	5.0	18.8	32.4	46.2	59.7	57	32.42	+ 0.15	30.82	+ 30.80	18 58 3.37
	Uranus .....	21.8	35.3	48.6	2.1	15.4	3	48.64	+ 0.25	.....	+ 30.67	23 4 19.56
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+ 16.30	.....	+ 31.05	13 2 22.85
	$\eta$ Bootis.....	3.5	17.4	31.4	45.4	59.5	46	31.44	+ 0.11	+ 31.04	+ 31.01	13 47 2.56
	$\alpha$ Herculis.....	22.4	36.2	49.7	3.5	17.3	6	49.82	+ 0.14	30.83	+ 30.87	17 7 20.83
Sept. 7	$\alpha$ Ophiuchi.....	32.0	45.5	59.3	12.8	26.5	26	59.22	+ 0.15	30.82	+ 30.86	17 27 30.23
	$\delta$ Ursæ Minoris.....	17.5	1.5	44.0	28.0	11.0	23	44.40	- 6.86	.....	+ 30.82	18 24 8.36
	$\beta$ Lyræ.....	7.9	23.8	39.6	55.6	11.6	43	39.70	+ 0.01	30.86	+ 30.81	18 44 10.52
	$\zeta$ Aquilæ.....	5.0	18.8	32.4	46.2	59.7	57	32.42	+ 0.15	30.82	+ 30.80	18 58 3.37
	Uranus .....	21.8	35.3	48.6	2.1	15.4	3	48.64	+ 0.25	.....	+ 30.67	23 4 19.56
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+ 16.30	.....	+ 31.05	13 2 22.85
	$\eta$ Bootis.....	3.5	17.4	31.4	45.4	59.5	46	31.44	+ 0.11	+ 31.04	+ 31.01	13 47 2.56
Sept. 8	$\alpha$ Herculis.....	22.4	36.2	49.7	3.5	17.3	6	49.82	+ 0.14	30.83	+ 30.87	17 7 20.83
	$\alpha$ Ophiuchi.....	32.0	45.5	59.3	12.8	26.5	26	59.22	+ 0.15	30.82	+ 30.86	17 27 30.23
	$\delta$ Ursæ Minoris.....	17.5	1.5	44.0	28.0	11.0	23	44.40	- 6.86	.....	+ 30.82	18 24 8.36
	$\beta$ Lyræ.....	7.9	23.8	39.6	55.6	11.6	43	39.70	+ 0.01	30.86	+ 30.81	18 44 10.52
	$\zeta$ Aquilæ.....	5.0	18.8	32.4	46.2	59.7	57	32.42	+ 0.15	30.82	+ 30.80	18 58 3.37
	Uranus .....	21.8	35.3	48.6	2.1	15.4	3	48.64	+ 0.25	.....	+ 30.67	23 4 19.56
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+ 16.30	.....	+ 31.05	13 2 22.85
Sept. 9	$\eta$ Bootis.....	3.5	17.4	31.4	45.4	59.5	46	31.44	+ 0.11	+ 31.04	+ 31.01	13 47 2.56
	$\alpha$ Herculis.....	22.4	36.2	49.7	3.5	17.3	6	49.82	+ 0.14	30.83	+ 30.87	17 7 20.83
	$\alpha$ Ophiuchi.....	32.0	45.5	59.3	12.8	26.5	26	59.22	+ 0.15	30.82	+ 30.86	17 27 30.23
	$\delta$ Ursæ Minoris.....	17.5	1.5	44.0	28.0	11.0	23	44.40	- 6.86	.....	+ 30.82	18 24 8.36
	$\beta$ Lyræ.....	7.9	23.8	39.6	55.6	11.6	43	39.70	+ 0.01	30.86	+ 30.81	18 44 10.52
	$\zeta$ Aquilæ.....	5.0	18.8	32.4	46.2	59.7	57	32.42	+ 0.15	30.82	+ 30.80	18 58 3.37
	Uranus .....	21.8	35.3	48.6	2.1	15.4	3	48.64	+ 0.25	.....	+ 30.67	23 4 19.56
Sept. 10	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+ 16.30	.....	+ 31.05	13 2 22.85
	$\eta$ Bootis.....	3.5	17.4	31.4	45.4	59.5	46	31.44	+ 0.11	+ 31.04	+ 31.01	13 47 2.56
	$\alpha$ Herculis.....	22.4	36.2	49.7	3.5	17.3	6	49.82	+ 0.14	30.83	+ 30.87	17 7 20.83
	$\alpha$ Ophiuchi.....	32.0	45.5	59.3	12.8	26.5	26	59.22	+ 0.15	30.82	+ 30.86	17 27 30.23
	$\delta$ Ursæ Minoris.....	17.5	1.5	44.0	28.0	11.0	23	44.40	- 6.86	.....	+ 30.82	18 24 8.36
	$\beta$ Lyræ.....	7.9	23.8	39.6	55.6	11.6	43	39.70	+ 0.01	30.86	+ 30.81	18 44 10.52
	$\zeta$ Aquilæ.....	5.0	18.8	32.4	46.2	59.7	57	32.42	+ 0.15	30.82	+ 30.80	18 58 3.37
Sept. 11	Uranus .....	21.8	35.3	48.6	2.1	15.4	3	48.64	+ 0.25	.....	+ 30.67	23 4 19.56
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	.....	0.0	1	35.50	+  </			

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.			observed.	interpo- lated.	
Sept. 5	$\beta$ Lyrae.....	8.4	24.2	40.1	56.1	11.8	m. s. 43 40.12	+ 0.01	+ 30.42	+ 30.45	h. m. s. 18 44 10.58
	$\zeta$ Aquilae.....	5.3	19.2	32.8	46.5	0.2	57 32.80	+ 0.15	30.43	+ 30.45	18 58 3.40
	$\delta$ Aquilae.....	28.6	42.1	55.2	8.5	21.8	16 55.24	+ 0.22	30.41	+ 30.45	19 17 25.91
	$\gamma$ Aquilae.....	41.5	55.1	8.7	22.1	35.6	38 8.60	+ 0.17	30.54	+ 30.45	19 38 39.22
	$\alpha$ Aquilae.....	1.2	14.6	28.1	41.5	55.0	42 28.08	+ 0.18	30.46	+ 30.45	19 42 58.71
	Uranus.....	13.0	26.4	39.7	53.1	6.4	3 39.72	+ 0.26	.....	+ 30.47	23 4 10.45
Sept. 6	Sun 1 Limb.....	58.3	11.6	25.0	.....	51.5	56 24.95	+ 0.21	.....	+ 30.74	10 56 55.90
	Sun 2 Limb.....	.....	.....	33.3	46.5	0.1	58 33.23	+ 0.21	.....	+ 30.74	10 59 4.18
	$\alpha$ Ursae Minoris S. P. ....	.....	.....	.....	48.0	.....	1 35.80	+ 17.07	.....	+ 30.78	.....
	$\alpha$ Coronae borealis.....	53.4	8.2	23.1	38.0	53.0	27 23.14	+ 0.07	+ 30.82	+ 30.82	.....
Sept. 7	$\eta$ Bootis.....	3.2	17.2	31.3	45.3	59.4	46 31.28	+ 0.16	+ 31.12	+ 31.13	13 47 2.57
	$\alpha$ Bootis.....	21.1	.....	.....	3.5	17.5	7 49.32	+ 0.15	31.17	+ 31.13	14 8 20.60
	$\delta$ Ophiuchi.....	58.8	12.4	25.6	38.9	52.3	5 25.60	+ 0.30	31.05	+ 31.17	16 5 57.07
	$\zeta$ Pegasi.....	30.8	44.4	58.0	11.5	25.1	32 57.96	+ 0.22	31.26	+ 31.28	22 33 29.46
	$\alpha$ Pegasi.....	49.2	2.8	16.5	30.3	44.1	56 16.58	+ 0.19	31.39	+ 31.29	22 56 48.06
	Uranus.....	54.5	7.7	21.1	34.5	47.8	3 21.12	+ 0.32	.....	+ 31.29	23 3 52.73
Sept. 9	Sun 1 Limb.....	46.2	59.7	12.9	26.1	39.5	7 12.88	+ 0.24	.....	+ 32.17	11 7 45.29
	Sun 2 Limb.....	54.2	7.6	20.8	34.2	47.6	9 20.88	+ 0.24	.....	+ 32.17	11 9 53.29
	$\beta$ Lyrae.....	.....	22.1	38.2	54.0	.....	43 38.10	+ 0.04	+ 32.33	+ 32.42	18 44 10.56
	$\alpha$ Aquarii.....	35.2	48.4	1.5	14.8	28.3	57 1.64	+ 0.29	32.46	+ 32.48	21 57 34.41
	$\zeta$ Pegasi.....	30.0	43.4	56.8	10.2	23.6	32 56.80	+ 0.22	32.43	+ 32.50	22 33 29.52
	$\alpha$ Pegasi.....	47.8	1.6	15.4	29.1	42.7	56 15.32	+ 0.19	32.66	+ 32.51	22 56 48.02
Sept. 10	Uranus.....	35.6	48.8	2.1	15.5	28.8	3 2.16	+ 0.32	.....	+ 32.51	23 3 34.99
	Sun 2 Limb.....	.....	.....	.....	9.5	23.2	12 56.29	+ 0.28	.....	+ 32.88	11 13 29.45
	12 Canum Venat. ....	23.3	40.5	.....	.....	31.9	47 57.61	- 0.01	+ 32.84	+ 32.93	12 48 30.53
	$\alpha$ Ursae Minoris S. P. ....	9.0	22.0	.....	46.0	58.5	1 33.92	+ 18.62	.....	+ 32.93	13 2 25.47
	$\delta$ Ursae Minoris.....	12.5	56.0	40.0	24.5	9.0	23 40.40	- 7.77	.....	+ 33.09	18 24 5.72
	$\beta$ Lyrae.....	5.5	21.3	37.3	53.1	9.1	43 37.26	+ 0.06	33.13	+ 33.10	18 44 10.42
	$\alpha$ Aquilae.....	58.4	11.7	25.3	38.6	52.1	42 25.22	+ 0.26	33.18	+ 33.13	19 42 58.61
	$\beta$ Aquilae.....	27.2	40.5	54.0	7.3	20.6	46 53.92	+ 0.27	33.14	+ 33.14	19 47 27.33
	$\alpha^2$ Capricorni.....	9.7	23.4	37.1	50.7	4.5	8 37.08	+ 0.38	33.15	+ 33.15	20 9 10.61
	Uranus.....	25.6	39.0	52.4	5.7	19.2	2 52.38	+ 0.35	.....	+ 33.23	23 3 25.96
Sept. 11	Sun 1 Limb.....	.....	9.9	23.4	36.7	50.1	14 23.34	+ 0.32	.....	+ 33.60	11 14 57.26
	Sun 2 Limb.....	4.6	18.0	31.4	44.7	58.1	16 31.36	+ 0.32	.....	+ 33.60	11 17 5.28
	$\delta$ Ursae Minoris.....	13.0	56.5	39.5	22.5	6.0	23 39.50	- 7.90	.....	+ 33.80	.....
	$\beta$ Lyrae.....	4.8	20.6	36.5	52.4	8.3	43 36.52	+ 0.09	+ 33.82	+ 33.81	18 44 10.42
	$\zeta$ Aquilae.....	1.6	15.5	29.3	42.8	56.5	57 29.14	+ 0.26	33.90	+ 33.82	18 58 3.22
	$\delta$ Aquilae.....	25.0	38.4	51.6	5.1	18.4	16 51.70	+ 0.34	33.76	+ 33.83	19 17 25.87
	$\gamma$ Aquilae.....	38.2	51.6	5.2	18.6	32.2	38 5.16	+ 0.28	33.80	+ 33.84	19 38 39.28
	$\alpha$ Aquilae.....	57.6	11.1	24.5	37.8	51.3	42 24.46	+ 0.30	33.89	+ 33.84	19 42 58.60
	Uranus.....	16.4	29.9	43.2	56.5	9.8	2 43.16	+ 0.39	.....	+ 33.94	23 3 17.49
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sept. 12	Sun 2 Limb.....	.....	.....	.....	20.0	33.4	20 6.66	+ 0.20	.....	+ 34.32	11 20 41.18
	$\alpha$ Ursae Minoris S.P. ....	11.5	23.0	.....	49.0	.....	1 36.23	+ 15.56	.....	+ 34.36	.....
	$\alpha$ Herculis.....	18.7	32.4	46.1	59.8	13.6	6 46.12	+ 0.14	+ 34.39	+ 34.47	17 7 20.73
	$\zeta$ Pegasi.....	27.7	41.4	54.8	8.2	21.6	32 54.74	+ 0.17	34.55	+ 34.57	22 33 29.48
	$\alpha$ Pegasi.....	46.1	59.7	13.3	27.1	40.6	56 13.36	+ 0.15	34.67	+ 34.58	22 56 48.09
	Mercury 2 Limb.....	23.9	37.6	51.2	4.6	18.2	21 51.10	+ 0.21	.....	+ 34.72	10 22 26.06
Sept. 13	Sun 1 Limb.....	7.0	20.3	33.6	47.0	0.4	21 33.66	+ 0.28	.....	+ 34.74	11 22 8.68
	Sun 2 Limb.....	14.7	28.1	41.5	55.0	8.3	23 41.52	+ 0.28	.....	+ 34.74	11 24 16.54
	$\alpha$ Ursae Minoris S. P. ....	8.5	22.0	.....	47.5	59.5	1 34.45	+ 17.12	.....	+ 34.76	.....
	$\eta$ Bootis.....	59.6	13.6	27.5	41.5	55.4	46 27.52	+ 0.18	+ 34.81	+ 34.77	13 47 2.47



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpolated.			
Sept. 13	$\alpha$ Bootis.....	17.4	31.5	45.6	59.7	13.7	7	45.58	+ 0.18	+34.81	+34.78	14	8	20.54
	$\epsilon$ Bootis.....	53.8	8.8	23.7	38.9	53.8	37	23.80	+ 0.12	34.80	+34.78	14	37	58.70
	(a) Moon 1 Limb.....	16.2	31.0	46.1	1.0	15.9	17	46.04	+ 0.43	.....	+34.79	15	18	21.26
	$\alpha$ Coronæ borealis.....	49.1	4.1	19.0	33.8	48.9	27	18.98	+ 0.12	34.80	+34.79	15	27	53.89
	$\zeta$ Pegasi.....	27.5	40.8	54.4	8.0	21.4	32	54.42	+ 0.24	34.80	+34.90	22	33	29.56
	$\alpha$ Pegasi.....	45.6	59.4	13.1	26.7	40.4	56	13.04	+ 0.22	34.93	+34.90	22	56	48.16
	Uranus.....	57.5	11.0	24.4	37.7	51.1	2	24.34	+ 0.34	.....	+34.90	23	2	59.58
Sept. 16	$\delta$ Aquilæ.....	22.7	36.0	49.4	2.5	15.9	16	49.30	+ 0.26	+36.17	+36.02	19	17	25.58
	$\gamma$ Aquilæ.....	35.8	49.3	2.8	16.2	29.6	38	2.74	+ 0.21	36.23	+36.02	19	38	38.97
	$\alpha$ Aquilæ.....	55.6	9.0	22.4	35.9	49.3	42	22.44	+ 0.22	35.93	+36.02	19	42	58.68
	$\beta$ Aquilæ.....	24.4	37.6	51.2	4.4	17.7	46	51.06	+ 0.23	35.97	+36.02	19	47	27.31
	$\alpha$ Cygni.....	46.0	4.7	23.5	42.2	0.7	35	23.42	- 0.08	35.81	+36.03	20	35	59.37
INSTRUMENT REVERSED.														
Sept. 17	$\alpha$ Bootis.....	15.7	29.8	44.0	58.1	12.2	7	43.96	+ 0.39	+36.18	+36.08	14	8	20.43
	$\alpha$ Ophiuchi.....	26.0	39.6	53.3	6.9	20.6	26	53.28	+ 0.44	36.25	+36.11	17	27	29.83
	$\delta$ Ursæ Minoris.....	3.5	46.5	30.5	14.0	57.5	23	30.40	- 3.47	.....	+36.13	.....	.....	.....
	$\zeta$ Aquilæ.....	59.4	13.0	26.8	40.5	54.2	57	26.78	+ 0.43	36.00	+36.14	18	58	3.35
	$\delta$ Aquilæ.....	22.6	35.8	49.2	2.4	15.7	16	49.14	+ 0.49	36.08	+36.14	19	17	25.77
	$\gamma$ Aquilæ.....	35.6	49.2	2.7	16.1	29.6	38	2.64	+ 0.45	36.07	+36.15	19	38	39.24
	Uranus.....	21.0	34.2	47.6	1.1	14.5	1	47.68	+ 0.55	.....	+36.20	23	2	24.43
Sept. 18	Venus 1 Limb.....	53.9	7.7	21.4	35.2	48.9	0	21.42	+ 0.56	.....	+36.63	13	0	58.61
	$\alpha$ Ursæ Minoris S. P. ....	.....	.....	.....	57.0	10.0	1	44.40	+ 7.77	.....	+36.63	13	2	28.80
	$\alpha$ Coronæ borealis.....	47.0	1.8	16.8	31.7	46.8	27	16.82	+ 0.33	+36.67	+36.68	15	27	53.83
	$\alpha$ Serpentis.....	18.3	31.8	45.2	58.6	12.1	35	45.20	+ 0.43	36.64	+36.68	15	36	22.31
	$\delta$ Ursæ Minoris.....	.....	45.5	.....	.....	56.5	23	29.25	- 3.00	.....	+36.73	18	24	2.98
	$\beta$ Lyrae.....	1.3	17.2	33.2	49.1	5.1	43	33.18	+ 0.29	36.82	+36.74	18	44	10.21
	$\delta$ Aquilæ.....	21.9	35.2	48.6	1.8	15.2	16	48.54	+ 0.45	36.71	+36.75	19	17	25.74
	$\alpha$ Aquilæ.....	54.5	7.8	21.4	34.8	48.3	42	21.36	+ 0.42	36.78	+36.75	19	42	58.53
Sept. 19	Uranus.....	11.9	25.2	38.7	52.2	5.6	1	38.72	+ 0.51	.....	+36.81	23	2	16.04
	Sun 1 Limb.....	.....	.....	.....	17.2	30.5	43	3.87	+ 0.50	.....	+36.90	11	43	41.27
	Sun 2 Limb.....	45.2	58.4	11.5	25.1	38.5	45	11.74	+ 0.50	.....	+36.90	11	45	49.14
	$\zeta$ Aquilæ.....	58.5	12.2	25.8	39.5	53.2	57	25.84	+ 0.43	+36.90	+36.98	18	58	3.25
	$\delta$ Aquilæ.....	21.6	34.8	48.2	1.5	14.8	16	48.18	+ 0.49	37.01	+36.99	19	17	25.66
	$\gamma$ Aquilæ.....	34.6	48.3	1.6	15.2	28.6	38	1.66	+ 0.45	37.02	+36.99	19	38	39.10
	$\alpha$ Aquilæ.....	54.2	7.6	21.1	34.5	47.9	42	21.06	+ 0.46	37.03	+36.99	19	42	58.51
	$\beta$ Aquilæ.....	23.1	36.4	49.7	3.1	16.5	46	49.76	+ 0.47	36.99	+36.99	19	47	27.22
Sept. 20	$\pi$ Capricorni.....	3.8	18.0	32.0	45.9	0.2	17	31.98	+ 0.63	.....	+37.00	20	18	9.61
	$\downarrow$ Capricorni.....	30.0	44.5	59.5	14.4	29.1	35	59.50	+ 0.69	.....	+37.00	20	36	37.19
	$\delta$ Aquilæ.....	21.3	34.5	47.8	1.1	14.5	16	47.84	+ 0.49	+37.34	+37.32	19	17	25.65
	$\gamma$ Aquilæ.....	34.4	47.8	1.4	14.9	28.4	38	1.38	+ 0.45	37.29	+37.33	19	38	39.16
	$\alpha$ Aquilæ.....	54.0	7.3	20.7	34.1	47.6	42	20.74	+ 0.46	37.33	+37.33	19	42	58.53
	$\beta$ Aquilæ.....	22.6	36.1	49.5	2.8	16.1	46	49.42	+ 0.47	37.31	+37.33	19	47	27.22
	$\zeta$ Cygni.....	59.8	15.0	30.3	45.8	1.1	5	30.40	+ 0.33	37.36	+37.35	21	6	8.08
	Moon 1 Limb.....	53.9	8.0	22.0	36.2	50.4	51	22.10	+ 0.63	.....	+37.36	21	52	0.09
Sept. 21	$\theta$ Aquarii.....	.....	.....	45.8	59.3	12.6	7	45.80	+ 0.56	.....	+37.37	22	8	23.73
	$\sigma$ Aquarii.....	6.1	19.6	33.2	46.6	0.2	21	33.14	+ 0.58	.....	+37.37	22	22	11.09
	Mercury 2 Limb.....	21.6	35.2	48.7	2.2	15.6	48	48.66	+ 0.49	.....	+37.67	10	49	26.82
	Sun 1 Limb.....	.....	.....	.....	.....	40.2	50	13.57	+ 0.54	.....	+37.68	11	50	51.79
	Sun 2 Limb.....	55.0	.....	.....	.....	48.5	52	21.75	+ 0.54	.....	+37.68	11	52	59.97
	Venus 1 Limb.....	.....	.....	.....	51.6	5.6	57	38.00	+ 0.65	.....	+37.69	12	58	16.34
	(a) Faint.													

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Sept. 21	$\alpha$ Bootis .....	<sup>s.</sup> 14.0	<sup>s.</sup> 28.2	<sup>s.</sup> 42.4	<sup>s.</sup> 56.5	<sup>s.</sup> 10.6	<sup>m.</sup> 7	<sup>s.</sup> 42.34	<sup>s.</sup> + 0.43	<sup>s.</sup> + 37.73	<sup>s.</sup> + 37.71	<sup>h.</sup> 14	<sup>m.</sup> 8	<sup>s.</sup> 20.48
	$\alpha$ Coronæ borealis.....	45.8	0.6	15.6	30.6	45.6	27	15.64	+ 0.38	37.76	+ 37.73	15	27	53.75
	$\delta$ Ursæ Minoris .....	0.0	44.0	27.5	10.5	54.0	23	27.20	- 6.95	.....	+ 37.77	.....	.....	.....
	$\beta$ Lyræ.....	0.4	16.2	32.1	48.0	3.8	43	32.10	+ 0.33	37.79	+ 37.78	18	44	10.21
	$\alpha$ Aquilæ .....	53.4	6.6	20.2	33.6	47.1	42	20.18	+ 0.50	37.84	+ 37.79	19	42	58.47
	$\beta$ Aquilæ .....	22.3	35.6	49.0	2.4	15.7	46	49.00	+ 0.51	37.68	+ 37.80	19	47	27.31
	69 Aquilæ .....	12.3	.....	.....	.....	5.6	20	38.95	+ 0.57	.....	+ 37.80	20	21	17.32
	.....	.....	25.1	38.3	51.6	.....	.....	38.33	+ 0.57	.....	.....	.....	.....	.....†
	70 Aquilæ.....	.....	32.2	45.4	58.8	.....	27	45.47	+ 0.57	.....	+ 37.81	20	28	23.85
	.....	18.3	.....	.....	.....	11.5	.....	44.90	+ 0.57	.....	.....	.....	.....	.....†
	1 Aquarii.....	8.1	.....	.....	.....	1.2	30	34.65	+ 0.55	.....	+ 37.81	20	31	13.01
	.....	.....	21.0	34.1	47.3	.....	.....	34.13	+ 0.55	.....	.....	.....	.....	.....†
	3 Aquarii.....	12.0	.....	.....	.....	5.5	38	38.75	+ 0.59	.....	.....	.....	.....	.....†
	.....	.....	26.1	39.4	52.7	.....	.....	39.40	+ 0.59	.....	+ 37.81	20	39	17.80
	$\theta$ Aquarii .....	18.6	32.0	45.4	58.8	12.2	7	45.40	+ 0.60	.....	+ 37.83	22	8	23.83
	$\sigma$ Aquarii .....	5.6	19.1	32.8	46.3	59.9	21	32.74	+ 0.62	.....	+ 37.84	22	22	11.20
	Moon 1 Limb .....	48.2	2.0	15.8	29.8	43.7	45	15.90	+ 0.63	.....	+ 37.84	22	45	54.37
	Uranus .....	44.6	58.1	11.4	24.7	38.2	1	11.40	+ 0.59	.....	+ 37.85	23	1	49.84
	$\phi$ Aquarii.....	57.5	10.8	24.3	37.7	51.1	5	24.28	+ 0.59	.....	+ 37.85	23	6	2.72
	$\chi^1$ Piscium .....	39.6	52.8	6.0	19.3	32.6	18	6.06	+ 0.55	.....	+ 37.85	23	18	44.46
Sept. 22	$\alpha$ Pegasi .....	42.5	56.1	9.5	23.5	37.2	56	9.76	+ 0.45	+ 37.99	+ 38.02	22	56	48.23
	Uranus .....	35.8	49.3	2.6	16.1	29.5	1	2.66	+ 0.57	.....	+ 38.02	23	1	41.25
	$\phi$ Aquarii.....	57.4	10.6	24.1	37.4	50.8	5	24.06	+ 0.57	.....	+ 38.02	23	6	2.65
	$\chi^1$ Piscium .....	39.4	52.6	5.8	19.2	32.5	18	5.90	+ 0.53	.....	+ 38.03	23	18	44.46
	$\iota$ Piscium.....	38.8	52.1	5.5	18.8	32.1	31	5.46	+ 0.50	38.02	+ 38.03	23	31	43.99
	Moon 1 Limb .....	14.8	28.6	42.2	56.0	9.5	38	42.22	+ 0.56	.....	+ 38.03	23	39	20.81
	$\omega$ Piscium .....	1.4	14.8	28.2	41.4	54.7	50	28.10	+ 0.49	.....	+ 38.03	23	51	6.62
	$\alpha$ Andromedæ .....	59.4	14.6	29.9	45.0	0.2	59	29.82	+ 0.36	38.05	+ 38.03	0	0	8.21
	$\gamma$ Pegasi .....	54.5	8.5	22.3	36.1	49.7	4	22.22	+ 0.45	38.05	+ 38.03	0	5	0.70
	41 Piscium.....	17.4	30.8	44.2	57.5	11.1	11	44.20	+ 0.49	.....	+ 38.04	0	12	22.73
	Mercury 2 Limb.....	4.3	17.6	31.1	44.5	58.1	59	31.12	+ 0.46	.....	+ 38.16	11	0	9.74
Sept. 23	Sun 1 Limb.....	57.6	11.0	24.3	37.7	51.0	57	24.32	+ 0.50	.....	+ 38.17	11	58	2.99
	Sun 2 Limb.....	5.7	19.0	32.3	45.5	59.0	59	32.30	+ 0.50	.....	+ 38.17	12	0	10.97
	Venus 1 Limb.....	41.9	55.7	9.4	23.1	36.8	55	9.38	+ 0.59	.....	+ 38.18	12	55	48.15
	$\alpha$ Ursæ Minoris S. P.	20.0	31.0	42.0	54.5	7.5	1	43.00	+ 8.17	.....	+ 38.18	13	2	29.35
	$\alpha$ Bootis .....	13.7	27.6	41.8	55.9	10.0	7	41.80	+ 0.39	+ 38.29	+ 38.19	14	8	20.38
	$\alpha$ Coronæ borealis.....	45.5	0.2	15.2	30.0	45.1	27	15.20	+ 0.35	38.19	+ 38.21	15	27	53.76
	$\delta$ Ursæ Minoris.....	59.0	42.5	26.0	9.5	53.0	23	26.00	- 3.14	.....	+ 38.24	18	24	1.10
	$\beta$ Lyræ.....	59.8	15.7	31.5	47.4	3.3	43	31.54	+ 0.31	38.32	+ 38.24	18	44	10.09
	$\alpha$ Aquilæ.....	52.9	6.3	19.7	33.1	46.6	42	19.72	+ 0.45	38.32	+ 38.25	19	42	58.42
	$\beta$ Aquilæ .....	21.7	35.1	48.4	1.8	15.1	46	48.42	+ 0.47	38.27	+ 38.25	19	47	27.14
	Uranus .....	27.3	40.5	54.1	7.4	20.8	0	54.02	+ 0.54	.....	+ 38.29	23	1	32.85
	$\omega$ Piscium .....	1.1	14.5	27.8	41.0	54.4	50	27.76	+ 0.47	.....	+ 38.30	23	51	6.53
	Moon 2 Limb.....	41.1	54.7	8.5	22.3	36.0	35	8.52	+ 0.48	.....	+ 38.30	0	35	47.30
	$\epsilon$ Piscium .....	33.6	47.1	0.4	13.9	27.2	54	0.44	+ 0.46	.....	+ 38.31	0	54	39.21
	$\alpha$ Ursæ Minoris .....	35.0	.....	0.5	12.0	24.0	1	59.62	- 7.39	.....	+ 38.31	1	2	30.54
	$\eta$ Piscium.....	50.1	3.7	17.5	31.3	45.2	22	17.56	+ 0.42	.....	+ 38.31	1	22	56.29
	Juno.....	45.4	59.2	12.3	25.5	38.7	35	12.22	+ 0.50	.....	+ 38.31	1	35	51.03
Sept. 24	Sun 1 Limb.....	33.0	46.3	59.6	13.0	26.2	0	59.62	+ 0.54	.....	+ 38.29	12	1	38.45
	Sun 2 Limb.....	41.1	54.5	7.7	21.1	34.3	3	7.74	+ 0.54	.....	+ 38.29	12	3	46.57
	$\alpha$ Ursæ Minoris S. P.	17.0	.....	.....	.....	.....	1	42.90	+ 8.95	.....	+ 38.30	.....	.....	.....
	$\alpha$ Aquarii .....	28.8	42.2	55.5	8.6	22.0	56	55.42	+ 0.55	+ 38.37	+ 38.49	21	57	34.46
	$\alpha$ Andromedæ.....	59.2	14.2	29.2	44.1	59.2	59	29.18	+ 0.37	38.70	+ 38.55	0	0	8.10
	$\gamma$ Pegasi .....	54.3	8.0	21.7	35.5	49.2	4	21.74	+ 0.46	38.53	+ 38.55	0	5	0.75
	Mercury 2 Limb.....	42.4	55.8	9.4	22.7	36.3	11	9.32	+ 0.50	.....	+ 39.01	11	11	48.83



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	inter- polated.	
Sept. 25	Sun 1 Limb.....	18.1	21.6	34.8	48.0	1.5	4	34.80	+ 0.54	.....	+ 39.05	12 5 14.39
	Sun 2 Limb.....	16.3	29.6	43.0	56.4	9.6	6	42.98	+ 0.54	.....	+ 39.05	12 7 22.57
	Venus 1 Limb.....	43.3	57.1	10.8	24.5	38.4	52	10.82	+ 0.64	.....	+ 39.07	12 52 50.53
	$\alpha$ Ursæ Minoris S. P.	16.0	29.0	43.0	56.0	8.5	1	42.50	+ 8.95	.....	+ 39.08	13 2 30.53
	$\alpha$ Bootis.....	12.6	26.7	40.8	54.8	9.1	7	40.80	+ 0.42	+ 39.25	+ 39.12	14 8 20.34
	$\alpha$ Coronæ borealis.....	44.4	59.4	14.1	29.1	44.1	27	14.22	+ 0.37	39.13	+ 39.16	15 27 53.75
	$\alpha$ Serpentis.....	15.6	29.1	42.6	55.8	9.3	35	42.48	+ 0.50	39.21	+ 39.17	15 36 22.15
	$\delta$ Ursæ Minoris.....	56.0	40.0	23.5	7.5	51.5	23	23.70	- 3.43	.....	+ 39.26	18 23 59.53
	$\beta$ Lyræ.....	58.7	14.6	30.5	46.4	2.2	43	30.48	+ 0.33	39.32	+ 39.27	18 44 10.08
	$\zeta$ Aquilæ.....	56.2	9.7	23.6	37.2	50.9	57	23.52	+ 0.46	39.09	+ 39.28	18 58 3.26
	Uranus.....	9.7	23.0	36.4	49.8	3.1	0	36.40	+ 0.58	.....	+ 39.40	23 1 16.38
	Mercury 2 Limb.....	.....	.....	13.4	27.2	40.6	17	13.64	+ 0.52	.....	+ 39.69	11 17 53.85
Sept. 26	Sun 1 Limb.....	43.8	.....	.....	.....	.....	8	10.43	+ 0.57	.....	+ 39.71	12 8 50.71
	Sun 2 Limb.....	51.7	5.0	18.3	31.7	45.0	10	18.34	+ 0.57	.....	+ 39.71	12 10 58.62
	$\alpha$ Ursæ Minoris S. P.	16.5	30.0	41.0	54.5	7.0	1	41.80	+ 9.34	.....	+ 39.73	13 2 30.87
	$\alpha$ Bootis.....	12.1	26.1	40.2	54.4	8.6	7	40.28	+ 0.44	+ 39.74	+ 39.75	14 8 20.47
	$\alpha$ Coronæ borealis.....	43.6	58.6	13.6	28.4	43.4	27	13.52	+ 0.39	39.79	+ 39.77	15 27 53.68
	$\delta$ Ursæ Minoris.....	56.5	.....	23.5	7.0	50.5	23	23.40	- 3.58	.....	+ 39.82	18 23 59.64
	$\beta$ Lyræ.....	58.2	14.1	29.9	45.8	1.7	43	29.94	+ 0.35	39.82	+ 39.83	18 44 10.12
	$\alpha$ Aquilæ.....	51.2	4.6	18.0	31.5	45.0	42	18.06	+ 0.51	39.88	+ 39.84	19 42 58.41
	$\beta$ Aquilæ.....	20.1	33.4	46.8	0.1	13.4	46	46.76	+ 0.52	39.84	+ 39.85	19 47 27.13
	Uranus.....	.....	14.2	27.6	40.8	54.1	0	27.48	+ 0.60	.....	+ 39.89	23 1 7.97
Sept. 28	$\alpha$ Lyræ.....	16.8	33.9	50.8	7.7	24.8	30	50.80	+ 0.29	+ 39.80	+ 39.85	18 31 30.94
	$\beta$ Lyræ.....	57.9	13.8	29.8	45.7	1.6	43	29.76	+ 0.33	39.97	+ 39.85	18 44 9.94
	$\zeta$ Cygni.....	57.2	12.5	27.9	43.1	58.5	5	27.84	+ 0.35	39.80	+ 39.87	21 6 8.06
	$\beta$ Aquarii.....	1.3	14.6	28.0	41.3	54.6	22	27.96	+ 0.55	39.78	+ 39.87	21 23 8.38
	$\epsilon$ Pegasi.....	12.6	26.1	39.5	53.1	6.5	35	39.56	+ 0.47	39.93	+ 39.87	21 36 19.90
	$\alpha$ Ursæ Minoris.....	33.0	45.0	58.0	12.0	24.5	1	58.50	- 7.37	.....	+ 39.89	.....
	Juno.....	47.0	0.2	13.4	26.7	39.8	33	13.42	+ 0.52	.....	+ 39.90	1 33 53.84
Sept. 29	$\alpha$ Aurigæ.....	59.5	14.8	29.8	45.1	0.5	4	29.94	+ 0.34	.....	+ 40.22	6 5 10.50
	$\mu$ Geminorum.....	6.7	21.1	35.6	49.9	4.6	12	35.58	+ 0.38	+ 40.32	+ 40.22	6 13 16.18
	$\delta$ Ursæ Minoris S. P.	45.5	29.0	14.0	57.0	40.5	23	13.20	+ 3.58	.....	+ 40.22	6 23 57.00
	$\epsilon$ Geminorum.....	54.5	9.2	23.8	38.5	53.3	33	23.86	+ 0.37	.....	+ 40.21	6 34 4.44
	$\alpha$ Canis Majoris.....	56.8	10.7	24.4	38.3	52.1	37	24.46	+ 0.60	40.28	+ 40.21	6 38 5.27
	Moon 2 Limb.....	49.8	5.5	20.9	36.4	51.8	50	20.88	+ 0.37	.....	+ 40.21	6 51 1.46
	$\delta$ Geminorum.....	23.6	38.0	52.4	6.7	21.0	9	52.34	+ 0.39	40.19	+ 40.21	7 10 32.94
	$\epsilon$ Geminorum.....	35.4	50.5	5.5	20.6	35.6	15	5.52	+ 0.36	.....	+ 40.21	7 15 46.09
	$\alpha$ Geminorum preced.	9.7	.....	41.1	.....	12.5	23	41.10	+ 0.33	40.19 {	+ 40.21	7 24 21.64
	$\alpha$ Geminorum follow.	.....	25.7	.....	57.2	.....	23	41.45	+ 0.33		+ 40.21	7 24 21.99
	$\alpha$ Canis Minoris.....	47.1	0.4	13.8	27.2	40.5	30	13.80	+ 0.47	40.16	+ 40.21	7 30 54.48
	$\beta$ Geminorum.....	19.4	34.5	49.5	4.6	19.6	34	49.52	+ 0.36	40.13	+ 40.21	7 35 30.09
	Mercury 2 Limb.....	6.2	19.6	32.9	.....	.....	42	32.94	+ 0.48	.....	+ 40.18	11 43 13.60
Sept. 30	Sun 1 Limb.....	9.5	22.8	36.1	49.2	2.7	22	36.06	+ 0.51	.....	+ 40.18	12 23 16.75
	$\alpha$ Ursæ Minoris S. P.	18.0	.....	.....	.....	.....	1	44.30	+ 7.43	.....	+ 40.18	13 2 31.91
	$\alpha$ Lyræ.....	16.5	33.4	50.5	7.6	24.7	30	50.54	+ 0.29	+ 40.01	+ 40.03	18 31 30.86
	$\beta$ Lyræ.....	57.7	13.7	29.6	45.5	1.3	43	29.56	+ 0.33	40.12	+ 40.03	18 44 9.92
	$\zeta$ Aquilæ.....	55.3	9.0	22.7	36.5	50.2	57	22.74	+ 0.43	39.81	+ 40.03	18 58 3.20
	$\alpha$ Cygni.....	41.4	59.8	18.5	37.2	56.0	35	18.58	+ 0.25	40.03	+ 40.01	20 35 58.84
	$\zeta$ Cygni.....	57.0	12.2	27.5	42.7	58.0	5	27.48	+ 0.34	40.14	+ 40.01	21 6 7.83
	Uranus.....	27.9	41.3	54.7	8.1	21.5	59	54.70	+ 0.54	.....	+ 40.00	23 0 35.24
Oct. 1	Mercury 2 Limb.....	2.3	15.5	28.8	42.3	.....	55	28.90	+ 0.60	.....	+ 40.85	11 56 10.35
Oct. 2	Sun 1 Limb.....	22.8	36.2	49.6	3.0	16.2	29	49.56	+ 0.64	.....	+ 40.87	12 30 31.07

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Oct. 2	Sun 2 Limb.....	31.6	44.8	58.3	11.5	25.1	m. s.	31 58.26	+ 0.64	.....	+40.87	h. m. s.	12 32 39.77	
	$\alpha$ Ursæ Minoris S. P. ....	29.0	42.5	53.0	.....	.....	1 41.50	+10.16	.....	.....	+40.88	13 2 32.54		
	$\alpha$ Bootis.....	10.6	24.7	38.8	53.0	7.2	7 38.86	+ 0.49	+41.08	+40.90	14 8 20.25			
	$\alpha$ Coronæ borealis.....	42.3	57.3	12.2	27.1	42.0	27 12.18	+ 0.44	41.00	+40.94	15 27 53.56			
	$\alpha$ Serpentis.....	13.7	27.0	40.5	53.8	7.3	35 40.46	+ 0.58	41.07	+40.94	15 36 21.98			
	$\alpha$ Cygni.....	40.2	58.9	17.6	36.5	55.2	35 17.68	+ 0.30	40.83	+41.06	20 35 59.04			
	$\zeta$ Cygni.....	56.1	11.4	26.5	41.8	57.2	5 26.60	+ 0.43	40.90	+41.07	21 6 8.10			
	Uranus.....	11.1	24.5	37.9	51.2	4.6	59 37.86	+ 0.67	.....	+41.11	23 0 19.64			
	$\alpha$ Ursæ Minoris.....	34.0	47.0	1.5	13.5	27.0	2 0.60	- 9.14	.....	+41.16	1 2 32.62			
	Juno.....	49.0	2.4	15.6	28.9	42.1	31 15.60	+ 0.63	.....	+41.18	1 31 57.41			
Oct. 3	Sun 1 Limb.....	0.0	13.4	26.8	39.9	53.4	33 26.70	+ 0.68	.....	+41.45	12 34 8.83			
	Sun 2 Limb.....	8.5	22.0	35.4	48.7	2.2	35 35.36	+ 0.68	.....	+41.45	12 36 17.49			
	$\alpha$ Ursæ Minoris S. P. ....	13.5	27.5	39.0	52.0	5.0	1 39.40	+10.93	.....	+41.46	.....			
Oct. 4	$\alpha$ Herculis.....	10.0	23.8	37.4	51.1	4.8	6 37.42	+ 0.56	+42.29	+42.24	17 7 20.22			
	$\alpha$ Ophiuchi.....	19.6	33.3	46.8	0.5	14.2	26 46.88	+ 0.57	42.23	+42.25	17 27 29.70			
	$\beta$ Aquarii.....	58.5	11.9	25.2	38.5	52.0	22 25.22	+ 0.70	42.30	+42.35	21 23 8.27			
	$\epsilon$ Pegasi.....	10.1	23.4	37.0	50.4	4.0	35 36.98	+ 0.60	42.32	+42.35	21 36 19.93			
	$\alpha$ Aquarii.....	24.6	37.8	51.2	4.6	17.8	56 51.20	+ 0.67	42.40	+42.36	21 57 34.23			
	Uranus.....	54.5	7.8	21.3	34.6	47.9	59 21.22	+ 0.71	.....	+42.39	23 0 4.32			
	$\alpha$ Ursæ Minoris.....	35.0	46.5	0.5	11.5	24.0	1 59.50	- 9.84	.....	+42.44	.....			
	Juno.....	43.0	56.2	9.5	22.8	36.0	30 9.50	+ 0.67	.....	+42.45	1 30 52.62			
	Mercury 2 Limb.....	26.4	39.7	53.3	6.5	19.9	14 53.16	+ 0.77	.....	+42.70	12 15 36.63			
	Venus 2 Limb.....	12.3	25.8	39.6	53.3	6.9	32 39.58	+ 0.87	.....	+42.71	12 33 23.16			
Oct. 5	Sun 1 Limb.....	15.3	28.6	41.9	55.5	8.5	40 41.96	+ 0.81	.....	+42.71	12 41 25.48			
	Sun 2 Limb.....	24.2	37.5	50.8	4.2	17.7	42 50.88	+ 0.81	.....	+42.71	12 43 34.40			
	$\alpha$ Ursæ Minoris S. P. ....	10.5	23.5	37.0	51.0	3.5	1 37.10	+13.28	.....	+42.72	13 2 33.10			
	$\alpha$ Bootis.....	8.8	22.8	37.1	51.2	5.3	7 37.04	+ 0.62	+42.76	+42.75	14 8 20.41			
	$\alpha$ Coronæ borealis.....	40.4	55.4	10.3	25.3	40.2	27 10.32	+ 0.55	42.71	+42.79	15 27 53.66			
	$\alpha$ Serpentis.....	11.8	25.2	38.5	51.8	5.3	35 38.52	+ 0.72	42.84	+42.79	15 36 22.03			
	$\delta$ Ursæ Minoris.....	51.0	34.0	18.0	1.0	44.5	23 17.70	- 5.05	.....	+42.87	18 23 55.52			
	$\beta$ Lyre.....	54.8	10.6	26.4	42.3	58.3	43 26.48	+ 0.49	42.93	+42.88	18 44 9.85			
	$\zeta$ Cygni.....	53.8	9.3	24.6	39.7	54.8	5 24.44	+ 0.53	42.91	+42.94	21 6 7.91			
	A. S. C. 2602.....	38.8	.....	.....	.....	32.1	45 5.45	+ 0.81	.....	+42.96	21 45 49.22			
	.....	.....	51.5	4.7	18.2	.....	4.80	+ 0.81	.....	.....	.....			
	A. S. C. 2607.....	39.1	.....	.....	.....	32.6	49 5.85	+ 0.82	.....	.....	.....			
	.....	.....	53.2	6.4	19.8	.....	6.47	+ 0.82	.....	+42.97	21 49 50.26			
	Uranus.....	46.1	59.5	12.8	26.2	39.6	59 12.84	+ 0.83	.....	+43.00	22 59 56.67			
	$\alpha$ Ursæ Minoris.....	36.0	49.0	3.5	14.0	27.5	2 2.00	-11.96	.....	+43.06	1 2 33.10			
	Juno.....	8.3	21.6	34.8	48.1	1.5	29 34.86	+ 0.79	.....	+43.07	1 30 18.72			
Oct. 7	Sun 1 Limb.....	31.7	45.1	58.5	11.8	25.2	47 58.46	+ 0.80	.....	+44.34	12 48 43.60			
	Sun 2 Limb.....	40.7	.....	7.4	20.6	34.2	50 7.38	+ 0.80	.....	+44.34	12 50 52.52			
	$\alpha$ Ursæ Minoris S. P. ....	9.0	.....	.....	.....	.....	1 35.70	+12.90	.....	+44.35	13 2 32.95			
	$\delta$ Ursæ Minoris.....	48.0	31.5	15.5	58.0	42.0	23 15.00	- 4.89	.....	+44.51	18 23 54.62			
	$\beta$ Lyre.....	.....	.....	.....	40.7	56.6	43 24.86	+ 0.49	+44.50	+44.52	18 44 9.87			
	$\gamma$ Aquilæ.....	26.6	40.1	53.6	7.1	20.5	37 53.58	+ 0.68	44.60	+44.55	19 38 38.81			
	$\alpha$ Aquilæ.....	46.1	59.4	13.0	26.4	39.8	42 12.94	+ 0.70	44.64	+44.55	19 42 58.19			
	$\beta$ Aquilæ.....	14.9	28.4	41.7	55.2	8.4	46 41.72	+ 0.71	44.52	+44.56	19 47 26.99			
	$\alpha$ Aquarii.....	22.3	35.6	49.0	2.2	15.5	56 48.92	+ 0.77	44.56	+44.62	21 57 34.31			
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
Oct. 8	$\alpha$ Cygni.....	35.7	54.4	13.2	31.8	50.4	35 13.10	+ 0.34	+45.23	+45.24	20 35 58.68			
	$\zeta$ Cygni.....	51.6	6.8	22.2	37.4	52.7	5 22.14	+ 0.51	45.19	+45.25	21 6 7.90			
	$\epsilon$ Pegasi.....	7.0	20.4	34.0	47.2	0.8	35 33.88	+ 0.68	45.30	+45.27	21 36 19.83			
	$\alpha$ Aquarii.....	21.6	34.8	48.1	1.5	14.6	56 48.12	+ 0.76	45.36	+45.28	21 57 34.16			
	$\zeta$ Pegasi.....	16.5	29.8	43.5	57.1	10.3	32 43.44	+ 0.67	45.28	+45.30	22 33 29.41			



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpol- ated.	
Oct. 8	Juno.....	19.8	33.1	46.3	.....	13.0	27 46.37	+ 0.77	.....	+ 45.40	1 28 32.54	
Oct. 9	Sun 1 Limb.....	49.8	3.1	16.5	29.8	43.3	55 16.50	+ 0.80	.....	+ 45.88	12 56 3.18	
	Sun 2 Limb.....	59.1	12.5	26.0	39.4	52.7	57 25.94	+ 0.80	.....	+ 45.88	12 58 12.62	
	$\beta$ Lyræ.....	51.4	7.5	23.3	39.2	55.0	43 23.28	+ 0.46	+ 46.07	+ 46.08	18 44 9.82	
	$\zeta$ Aquilæ.....	48.8	2.4	16.1	29.7	43.3	57 16.06	+ 0.64	46.12	+ 46.09	18 58 2.79	
	$\delta$ Aquilæ.....	12.1	25.3	38.5	51.8	5.2	16 38.58	+ 0.73	46.06	+ 46.10	19 17 25.41	
	$\zeta$ Cygni.....	50.6	5.9	21.2	36.5	51.7	5 21.18	+ 0.50	46.14	+ 46.16	21 6 7.84	
	$\beta$ Aquarii.....	54.4	7.8	21.3	34.6	47.8	22 21.18	+ 0.80	46.19	+ 46.17	21 23 8.15	
	$\alpha$ Ursæ Minoris.....	32.5	.....	.....	.....	.....	1 59.20	- 12.72	.....	+ 46.28	.....	
Venus 2 Limb.....	5.6	18.8	.....	.....	.....	22 32.43	+ 0.78	.....	+ 46.57	12 23 19.78		
Oct. 10	Sun 1 Limb.....	29.6	42.8	56.2	9.6	23.1	58 56.26	+ 0.76	.....	+ 46.58	12 59 43.60	
	$\alpha$ Ursæ Minoris S. P. ....	.....	21.0	.....	.....	.....	1 34.30	+ 11.74	.....	+ 46.58	13 2 32.62	
	$\delta$ Ursæ Minoris.....	42.5	27.0	11.0	.....	.....	23 10.37	- 4.44	.....	+ 46.74	18 23 52.67	
	$\zeta$ Aquilæ.....	47.9	1.7	15.5	29.1	42.7	57 15.38	+ 0.61	+ 46.82	+ 46.76	18 58 2.75	
	$\delta$ Aquilæ.....	11.5	24.6	37.9	51.2	4.6	16 37.96	+ 0.69	46.71	+ 46.77	19 17 25.42	
	$\zeta$ Cygni.....	49.8	5.4	20.5	35.7	51.1	5 20.50	+ 0.50	46.81	+ 46.82	21 6 7.82	
	$\beta$ Aquarii.....	53.8	7.2	20.6	34.0	47.2	22 20.56	+ 0.75	46.85	+ 46.83	21 23 8.14	
	$\epsilon$ Pegasi.....	5.4	18.9	32.5	45.8	59.4	35 32.40	+ 0.65	46.79	+ 46.83	21 36 19.88	
	Uranus.....	6.0	19.4	32.8	46.2	59.7	58 32.82	+ 0.76	.....	+ 46.88	22 59 20.46	
	Juno.....	4.5	17.8	31.1	44.3	57.6	26 31.06	+ 0.73	.....	+ 46.95	1 27 18.74	
	Venus 2 Limb.....	15.6	28.9	42.5	55.9	9.5	20 42.48	+ 0.63	.....	+ 47.29	12 21 30.40	
	$\alpha$ Ursæ Minoris S. P. ....	.....	23.0	.....	50.0	4.0	1 36.60	+ 8.63	.....	+ 47.31	.....	
Oct. 11	Sun 1 Limb.....	9.7	22.9	36.3	49.8	3.1	2 36.36	+ 0.61	.....	+ 47.31	13 3 24.28	
	Sun 2 Limb.....	19.0	32.4	46.0	59.4	12.7	4 45.90	+ 0.61	.....	+ 47.31	13 5 33.82	
Oct. 12	$\zeta$ Aquilæ.....	46.4	0.2	13.8	27.5	41.1	57 13.80	+ 0.58	+ 48.39	+ 48.35	18 58 2.73	
	$\delta$ Aquilæ.....	9.8	23.0	36.4	49.6	3.1	16 36.38	+ 0.65	48.29	+ 48.36	19 17 25.39	
	$\gamma$ Aquilæ.....	22.7	36.3	49.8	3.4	16.8	37 49.80	+ 0.60	48.37	+ 48.37	19 38 38.77	
	$\alpha$ Aquilæ.....	42.2	55.7	9.2	22.7	36.0	42 9.16	+ 0.61	48.43	+ 48.38	19 42 58.15	
	$\beta$ Aquilæ.....	11.4	24.5	37.8	51.1	4.6	46 37.88	+ 0.63	48.36	+ 48.38	19 47 26.89	
	Uranus.....	50.9	4.2	17.6	31.2	44.5	58 17.68	+ 0.72	.....	+ 48.47	22 59 6.87	
	$\alpha$ Ursæ Minoris.....	26.0	41.5	54.5	9.0	22.0	1 54.60	- 10.20	.....	+ 48.53	.....	
	Juno.....	46.9	0.3	13.6	26.8	40.2	25 13.56	+ 0.70	.....	+ 48.54	1 26 2.80	
Oct. 13	$\alpha$ Hereulis.....	3.2	16.7	30.4	44.3	58.2	6 30.56	+ 0.55	+ 49.03	+ 48.98	17 7 20.09	
	$\alpha$ Ophiuchi.....	12.7	26.3	39.8	53.5	7.3	26 39.92	+ 0.57	49.04	+ 48.99	17 27 29.48	
	$\delta$ Ursæ Minoris.....	39.5	23.5	7.5	49.5	.....	23 6.75	- 4.00	.....	+ 49.01	.....	
	$\alpha$ Lyræ.....	7.1	24.2	41.2	58.3	15.3	30 41.22	+ 0.37	48.93	+ 49.02	18 31 30.61	
	$\beta$ Lyræ.....	48.5	4.4	20.4	36.2	52.1	43 20.32	+ 0.42	48.98	+ 49.02	18 44 9.76	
Oct. 14	INSTRUMENT REVERSED.											
Oct. 15	Sun 1 Limb.....	.....	.....	22.3	35.7	49.1	17 22.24	+ 0.54	.....	+ 50.46	13 18 13.24	
	Sun 2 Limb.....	5.6	18.8	32.4	45.8	59.2	19 32.36	+ 0.54	.....	+ 50.46	13 20 23.36	
	$\alpha$ Aquarii.....	16.6	30.0	43.2	56.7	9.8	56 43.26	+ 0.49	+ 50.42	+ 50.73	21 57 34.48	
	$\zeta$ Pegasi.....	11.2	24.7	38.1	51.6	5.2	32 38.16	+ 0.41	50.76	+ 50.75	22 33 29.32	
	$\alpha$ Pegasi.....	29.7	43.1	56.7	10.3	24.0	55 56.76	+ 0.38	50.99	+ 50.76	22 56 47.90	
	Uranus.....	29.0	42.5	55.8	9.3	22.8	57 55.88	+ 0.53	.....	+ 50.76	22 58 47.17	
	$\epsilon$ Piscium.....	26.0	39.4	52.6	6.0	19.5	30 52.70	+ 0.45	50.83	+ 50.78	23 31 43.93	
	$\alpha$ Andromedæ.....	47.1	2.2	17.3	32.3	47.3	59 17.24	+ 0.26	50.80	+ 50.79	0 0 8.29	
	$\alpha$ Ursæ Minoris.....	34.0	45.5	0.5	12.0	28.5	2 0.10	- 17.96	.....	+ 50.82	.....	
	Juno.....	49.1	2.3	15.6	29.0	42.2	23 15.64	+ 0.51	.....	+ 50.83	1 24 6.98	
	Venus 2 Limb.....	.....	54.0	7.3	20.6	.....	13 7.30	+ 0.53	.....	+ 51.57	12 13 59.40†	

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.	Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.			
		I.	II.	III.	IV.	V.			observed.	interpolated.				
Oct. 16	Venus 2 Limb.....	<sup>s.</sup> 32.2	<sup>s.</sup> 45.7	<sup>s.</sup> 59.1	<sup>s.</sup> 12.5	<sup>s.</sup> 25.8	<sup>m.</sup> 11	<sup>s.</sup> 59.06	<sup>s.</sup> + 0.55	<sup>s.</sup> .....	<sup>s.</sup> + 51.78	<sup>h.</sup> 12	<sup>m.</sup> 12	<sup>s.</sup> 51.39
	$\alpha$ Ursæ Minoris S. P. ....	.....	12.0	.....	35.5	50.0	1	23.50	+ 18.07	.....	+ 51.81	13	2	33.38
Oct. 17	Sun 1 Limb.....	.....	34.6	48.0	1.6	.....	24	48.07	+ 0.56	.....	+ 51.82	13	25	40.45
	$\alpha$ Bootis .....	59.9	14.2	28.3	42.4	56.5	7	28.26	+ 0.36	+ 51.79	+ 51.84	14	8	20.46
	$\alpha$ Coronæ borealis ....	31.6	46.6	1.5	16.4	31.4	27	1.50	+ 0.31	51.66	+ 51.88	15	27	53.69
	$\delta$ Ursæ Minoris .....	40.0	23.0	.....	.....	.....	23	6.85	- 7.28	.....	+ 51.97	18	23	51.54
	29 Capricorni.....	32.7	46.9	0.2	14.2	28.0	6	0.40	+ 0.60	.....	+ 52.06	21	6	53.06
	$\beta$ Aquarii.....	48.7	2.0	15.4	28.7	42.1	22	15.38	+ 0.54	52.15	+ 52.06	21	23	7.98
	Moon 1 Limb .....	7.9	22.8	37.4	51.7	6.2	24	37.20	+ 0.64	.....	+ 52.07	21	25	29.91
	$\delta$ Capricorni.....	52.0	5.8	19.7	33.6	47.6	37	19.74	+ 0.60	.....	+ 52.07	21	38	12.41
	$\epsilon$ Aquarii.....	27.5	41.1	55.0	8.6	22.3	56	54.90	+ 0.59	.....	+ 52.08	21	57	47.57
	$\zeta$ Pegasi .....	9.8	23.3	36.8	50.4	3.7	32	36.80	+ 0.44	52.08	+ 52.10	22	33	29.34
	$\alpha$ Pegasi.....	28.0	41.7	55.5	9.1	22.7	55	55.40	+ 0.40	52.32	+ 52.11	22	56	47.91
	Uranus.....	15.2	28.6	42.0	55.5	8.8	57	42.02	+ 0.55	.....	+ 52.11	22	58	34.68
	$\alpha$ Ursæ Minoris .....	28.5	44.0	58.5	13.5	26.0	1	58.10	- 16.83	.....	+ 52.18	1	2	33.45
	Juno.....	29.7	43.0	56.4	9.8	23.3	21	56.44	+ 0.53	.....	+ 52.19	1	22	49.16
	Venus 2 Limb.....	31.6	45.1	58.5	11.8	25.3	10	58.46	+ 0.54	.....	+ 52.54	12	11	51.54
Oct. 18	Sun 1 Limb.....	4.2	18.5	31.8	45.2	58.8	28	31.70	+ 0.55	.....	+ 52.58	13	29	24.83
	Sun 2 Limb.....	15.7	29.2	42.5	56.1	9.5	30	42.60	+ 0.55	.....	+ 52.58	13	31	35.73
	$\alpha$ Coronæ borealis ....	30.6	45.6	0.5	15.5	30.5	27	0.54	+ 0.30	+ 52.62	+ 52.65	15	27	53.49
	$\alpha$ Serpentis.....	2.0	15.3	28.8	42.3	55.6	35	28.80	+ 0.45	52.73	+ 52.65	15	36	21.90
	$\delta$ Ursæ Minoris .....	37.0	21.0	4.0	47.5	31.0	23	4.10	- 7.29	.....	+ 52.76	.....	.....	.....
	$\beta$ Lyrae .....	44.8	0.7	16.7	32.6	48.5	43	16.66	+ 0.24	52.71	+ 52.77	18	44	9.67
	$\zeta$ Aquilæ.....	42.2	55.8	9.5	23.2	36.8	57	9.50	+ 0.40	52.77	+ 52.78	18	58	2.68
	$\delta$ Aquilæ.....	5.3	18.6	32.0	45.2	58.5	16	31.92	+ 0.47	52.83	+ 52.79	19	17	25.18
	$\delta$ Capricorni.....	50.7	5.0	18.5	32.7	46.4	37	18.66	+ 0.59	.....	+ 52.88	21	38	12.13
	$\epsilon$ Aquarii.....	26.4	40.1	53.8	7.7	21.4	56	53.88	+ 0.58	.....	+ 52.90	21	57	47.36
	Moon 1 Limb .....	14.9	28.9	42.8	56.8	10.8	17	42.84	+ 0.59	.....	+ 52.91	22	18	36.34
	58 Aquarii .....	51.8	5.5	19.0	32.5	46.3	22	19.02	+ 0.56	.....	+ 52.91	22	23	12.49
	Venus 2 Limb.....	39.6	53.0	6.4	19.8	33.2	10	6.40	+ 0.58	.....	+ 53.51	12	11	0.49
	$\alpha$ Ursæ Minoris S. P. ....	53.5	8.0	20.5	34.0	48.0	1	20.80	+ 18.84	.....	+ 53.55	13	2	33.19
	Oct. 19	Sun 1 Limb.....	48.8	2.2	15.8	29.3	43.0	32	15.82	+ 0.59	.....	+ 53.57	13	33
Sun 2 Limb.....		59.8	13.4	26.9	40.2	53.8	34	26.82	+ 0.59	.....	+ 53.57	13	35	20.98
$\eta$ Bootis .....		40.3	54.4	8.4	22.5	36.5	46	8.42	+ 0.40	+ 53.63	+ 53.58	13	47	2.40
$\alpha$ Bootis .....		58.3	12.4	26.5	40.6	54.7	7	26.50	+ 0.38	53.54	+ 53.59	14	8	20.47
$\alpha$ Coronæ borealis ....		29.5	44.5	59.6	14.4	29.5	26	59.50	+ 0.32	53.64	+ 53.65	15	27	53.47
$\alpha$ Serpentis.....		1.1	14.5	27.8	41.2	54.5	35	27.82	+ 0.49	53.67	+ 53.65	15	36	21.96
$\delta$ Ursæ Minoris .....		36.0	20.0	3.5	47.5	30.5	23	3.50	- 7.58	.....	+ 53.77	18	23	49.69
$\beta$ Lyrae.....		43.7	59.7	15.6	31.5	47.3	43	15.56	+ 0.27	53.76	+ 53.78	18	44	9.61
$\lambda$ Aquarii.....		55.0	8.4	21.7	35.1	48.6	43	21.76	+ 0.58	.....	+ 53.94	22	44	16.28
Uranus.....		1.5	14.9	28.2	41.6	55.0	57	28.24	+ 0.58	.....	+ 53.95	22	58	22.77
Moon 1 Limb .....		51.4	5.1	18.8	32.4	46.3	10	18.80	+ 0.59	.....	+ 53.96	23	11	13.35
$\lambda$ Piscium.....		32.4	45.7	59.2	12.4	25.6	32	59.06	+ 0.52	.....	+ 53.97	23	33	53.55
29 Piscium.....		16.8	30.1	43.4	56.7	10.2	52	43.44	+ 0.56	.....	+ 53.98	23	53	37.98
10 Ceti.....		4.8	.....	.....	.....	57.7	17	31.25	+ 0.54	.....	+ 54.00	0	18	25.79
.....		.....	17.5	31.0	44.2	.....	.....	30.90	+ 0.54	.....	.....	.....	.....	.....
12 Ceti.....		31.5	.....	.....	.....	25.0	20	58.25	+ 0.56	.....	.....	.....	.....	.....
.....		.....	45.2	58.5	11.8	.....	.....	58.50	+ 0.56	.....	+ 54.00	0	21	53.06
$\alpha$ Ursæ Minoris .....		30.0	43.5	56.0	10.5	24.0	1	56.80	- 17.54	.....	+ 54.03	1	2	33.29
Juno.....		10.5	23.7	37.2	50.5	3.8	20	37.14	+ 0.56	.....	+ 54.04	1	21	31.74
Oct. 20	$\alpha$ Pegasi.....	25.3	39.0	52.6	6.2	20.0	55	52.62	+ 0.48	+ 54.99	+ 54.87	22	56	47.97
	Uranus.....	54.8	8.4	22.0	35.3	48.6	57	21.82	+ 0.61	.....	+ 54.88	22	58	17.31
	$\epsilon$ Piscium .....	21.6	35.2	48.5	1.7	15.1	30	48.42	+ 0.54	55.00	+ 54.89	23	31	43.85
	$\lambda$ Piscium .....	31.4	44.7	58.1	11.3	24.6	32	58.02	+ 0.56	.....	+ 54.89	23	33	53.47



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Oct. 20	29 Piscium.....	15.7	29.1	42.4	55.8	9.1	52	42.42	+ 0.59	.....	+ 54.90	23 53 37.91
	$\alpha$ Andromedæ.....	42.8	58.0	13.0	28.1	43.1	59	13.00	+ 0.37	+ 54.92	+ 54.91	0 0 8.28
	Moon 1 Limb .....	5.6	19.3	33.0	46.6	0.3	3	32.96	+ 0.58	.....	+ 54.91	0 4 28.45
	$\beta$ Ceti.....	11.2	25.0	39.0	53.0	6.8	34	39.00	+ 0.68	54.68	+ 54.93	0 35 34.61
	$\delta$ Piscium.....	1.6	15.2	28.5	41.7	55.0	39	28.40	+ 0.53	.....	+ 54.93	0 40 23.86
	$\alpha$ Ursæ Minoris.....	27.5	42.5	54.0	9.0	20.5	1	54.70	- 16.39	.....	+ 54.94	.....
	Venus 2 Limb .....	22.4	35.6	49.1	2.4	15.8	8	49.06	+ 0.62	.....	+ 55.22	12 9 44.90
	$\alpha$ Ursæ Minoris S. P.	49.0	.....	18.0	.....	47.0	1	17.87	+ 19.63	.....	+ 55.24	.....
Oct. 21	Sun 1 Limb.....	.....	32.2	46.0	59.6	13.1	39	45.95	+ 0.65	.....	+ 55.26	13 40 41.86
	$\alpha$ Bootis .....	56.4	10.6	24.7	38.7	52.8	7	24.64	+ 0.43	+ 55.36	+ 55.27	14 8 20.34
	$\alpha$ Lyrae.....	0.7	17.7	34.8	51.8	8.8	30	34.76	+ 0.24	55.33	+ 55.39	18 31 30.39
	$\beta$ Lyrae.....	.....	57.9	14.0	29.8	45.6	43	13.89	+ 0.31	55.35	+ 55.39	18 44 9.59
Oct. 24	Venus 2 Limb.....	35.6	48.8	2.1	15.5	28.8	8	2.16	+ 0.58	.....	+ 58.88	12 9 1.62
	12 Canum Venat. ....	57.4	14.4	31.5	48.7	5.8	47	31.56	+ 0.21	+ 58.86	+ 58.91	12 48 30.68
	$\alpha$ Ursæ Minoris S. P.	46.5	1.5	15.5	29.0	42.0	1	14.90	+ 18.85	.....	+ 58.92	13 2 32.67
Oct. 25	Sun 1 Limb.....	27.3	41.0	54.6	8.2	22.0	54	54.62	+ 0.62	.....	+ 58.97	13 55 54.21
	Sun 2 Limb.....	39.4	53.2	6.7	20.4	34.0	57	6.74	+ 0.62	.....	+ 58.97	13 58 6.33
	$\delta$ Ursæ Minoris .....	.....	10.5	55.0	39.0	23.0	22	55.12	- 7.57	.....	+ 59.18	18 23 46.73
	$\zeta$ Pegasi .....	2.3	15.8	29.4	42.8	56.3	32	29.32	+ 0.48	59.44	+ 59.39	22 33 29.19
Oct. 26	$\alpha$ Cygni.....	20.0	38.8	57.3	16.1	34.7	34	57.38	+ 0.16	+ 60.68	+ 60.57	20 35 58.11
	$\epsilon$ Pegasi.....	51.8	5.4	18.5	32.1	45.5	35	18.66	+ 0.47	60.51	+ 60.62	21 36 19.75
	$\alpha$ Aquarii.....	6.4	19.6	32.8	46.1	59.4	56	32.86	+ 0.53	60.65	+ 60.64	21 57 34.03
	$\alpha$ Ursæ Minoris .....	.....	34.0	44.5	.....	16.0	1	46.90	- 15.32	.....	+ 60.78	.....
Oct. 27	$\alpha$ Ursæ Minoris S. P.	.....	.....	10.5	25.0	39.0	1	10.73	+ 20.07	.....	+ 62.04	13 2 32.84
Oct. 28	Sun 1 Limb.....	56.0	9.7	23.3	36.8	50.6	6	23.28	+ 0.74	.....	+ 62.08	14 7 26.10
	Sun 2 Limb.....	8.6	22.2	35.8	49.6	3.2	8	35.88	+ 0.74	.....	+ 62.08	14 9 38.70
	(a) Mercury 1 Limb .....	.....	.....	27.6	41.4	55.3	38	27.56	+ 0.76	.....	+ 2.10	14 38 30.42
	$\alpha$ Coronæ borealis .....	.....	.....	50.8	5.9	21.0	27	50.96	+ 0.43	+ 2.02	+ 2.13	15 27 53.52
	$\alpha$ Serpentis.....	52.4	5.8	19.3	32.6	46.1	36	19.24	+ 0.60	2.11	+ 2.13	15 36 21.97
	$\delta$ Ursæ Minoris .....	24.5	8.0	52.0	35.0	19.0	23	51.70	- 7.97	.....	+ 2.23	18 23 45.96
	$\zeta$ Pegasi .....	59.1	12.6	26.2	39.5	53.2	33	26.12	+ 0.58	2.51	+ 2.38	22 33 29.08
	$\alpha$ Ursæ Minoris S. P.	.....	.....	9.5	.....	.....	2	9.20	+ 20.83	.....	+ 2.88	13 2 32.91
	$\eta$ Bootis .....	30.8	45.2	59.1	13.2	27.3	46	59.12	+ 0.51	+ 2.89	+ 2.91	13 47 2.54
	$\epsilon$ Bootis.....	25.1	40.2	55.2	10.3	25.3	37	55.22	+ 0.43	2.80	+ 2.93	14 37 58.58
Oct. 29	$\beta$ Lyrae.....	34.4	50.2	6.0	21.8	37.8	44	6.04	+ 0.37	2.98	+ 3.08	18 44 9.49
	$\zeta$ Pegasi .....	58.5	11.8	25.2	38.7	52.4	33	25.32	+ 0.60	3.28	+ 3.21	22 33 29.13
	Uranus.....	1.0	14.4	27.7	41.3	54.6	57	27.80	+ 0.72	.....	+ 3.23	22 57 31.75
	$\alpha$ Andromedæ.....	34.3	49.4	4.5	19.6	34.6	0	4.48	+ 0.43	3.34	+ 3.26	0 0 8.17
	$\gamma$ Pegasi .....	29.4	43.1	56.8	10.5	24.4	4	56.84	+ 0.56	3.39	+ 3.27	0 5 0.67
	$\alpha$ Ursæ Minoris .....	20.0	36.0	48.5	2.5	15.5	2	48.50	- 19.25	.....	+ 3.30	1 2 32.55
	Moon 2 Limb .....	23.5	37.8	51.8	6.3	20.6	24	52.00	+ 0.56	.....	+ 3.58	9 24 56.14
	$\alpha$ Ursæ Minoris S. P.	40.0	54.0	8.0	22.5	36.0	2	8.10	+ 20.46	.....	+ 3.71	13 2 32.27
	Sun 1 Limb.....	38.7	52.5	6.2	19.8	33.5	15	6.14	+ 0.78	.....	+ 3.75	14 15 10.67
	Sun 2 Limb.....	52.0	5.7	19.4	33.0	46.8	17	19.38	+ 0.78	.....	+ 3.75	14 17 23.91
Oct. 30	$\delta$ Ursæ Minoris.....	.....	6.0	49.5	.....	.....	23	49.65	- 8.12	.....	+ 3.91	18 23 45.44
	$\beta$ Lyrae.....	33.4	49.2	5.0	.....	36.8	44	5.07	+ 0.38	+ 3.92	+ 3.92	.....
Oct. 31	$\delta$ Ursæ Minoris.....	21.0	.....	.....	.....	16.0	23	48.50	- 9.41	.....	+ 5.18	.....
	$\beta$ Lyrae.....	32.2	48.0	3.7	19.6	35.5	44	3.80	+ 0.37	+ 5.19	+ 5.19	.....

(a) Clock put forward one minute.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	interpo- lated.			
Oct. 31	ζ Pegasi .....	56.5	10.2	23.5	37.0	50.6	m. 33	s. 23.56	+ 0.64	+ 4.98	+ 5.11	h. 22	m. 33	s. 29.31
	α Andromedæ .....	32.5	47.6	2.6	17.7	32.7	0	2.62	+ 0.49	5.13	+ 5.15	0	0	8.26
	γ Pegasi .....	27.5	41.2	54.7	8.5	22.4	4	54.86	+ 0.59	5.32	+ 5.16	0	5	0.61
Nov. 1	β Lyrae .....	31.5	47.7	3.5	19.5	.....	44	3.48	+ 0.37	+ 5.49	+ 5.49	.....	.....	.....
Nov. 5	ζ Cygni .....	27.6	42.9	58.2	13.4	28.6	5	58.14	+ 0.37	+ 8.84	+ 8.90	21	6	7.41
	β Aquarii .....	31.4	44.7	58.1	11.6	24.8	22	58.12	+ 0.66	9.04	+ 8.90	21	23	7.68
	ε Pegasi .....	43.0	56.3	9.8	23.2	36.6	36	9.78	+ 0.56	9.16	+ 8.91	21	36	19.25
	Uranus .....	29.4	43.1	56.4	9.8	23.1	56	56.36	+ 0.67	.....	+ 8.94	22	57	5.97
	α Andromedæ .....	28.8	43.8	58.9	14.0	29.1	59	58.92	+ 0.39	8.90	+ 8.97	0	0	8.28
	γ Pegasi .....	24.2	37.8	51.4	5.2	19.0	4	51.52	+ 0.51	8.72	+ 8.97	0	5	1.00
	α Ursæ Minoris .....	11.5	26.5	.....	.....	.....	2	40.35	- 18.60	.....	+ 9.00	.....	.....	.....
Nov. 6	α Ursæ Minoris S. P.	31.0	46.0	1.5	.....	.....	2	0.40	+ 20.09	.....	+ 9.73	.....	.....	.....
Nov. 7	α Lyrae .....	46.1	3.0	19.8	37.0	54.1	31	20.00	+ 0.28	+ 9.70	+ 9.85	18	31	30.13
	ζ Cygni .....	26.6	41.3	56.8	12.1	27.5	5	56.86	+ 0.38	10.07	+ 9.91	21	6	7.15
Nov. 9	Sun 1 Limb .....	.....	.....	.....	.....	0.5	54	32.69	+ 0.74	.....	+ 11.01	14	54	44.44
	Sun 2 Limb .....	20.2	33.9	47.9	1.8	15.8	56	47.92	+ 0.74	.....	+ 11.01	14	56	59.67
	α Andromedæ .....	26.5	41.4	56.7	.....	.....	59	56.61	+ 0.39	+ 11.18	+ 11.18	.....	.....	.....
	α Ursæ Minoris .....	10.5	23.5	37.0	49.5	4.0	2	36.90	- 18.95	.....	+ 11.20	.....	.....	.....
Nov. 10	δ Ursæ Minoris .....	10.0	53.5	37.0	21.0	4.0	23	37.10	- 7.87	.....	+ 11.43	.....	.....	.....
	β Lyrae .....	25.7	41.6	57.5	13.3	29.2	43	57.46	+ 0.31	+ 11.42	+ 11.44	18	44	9.21
	ζ Aquilæ .....	23.0	36.6	50.5	4.1	17.8	57	50.40	+ 0.48	11.46	+ 11.44	18	58	2.32
	12 Canum Venat. ....	44.6	1.8	19.1	36.1	53.3	48	18.98	+ 0.21	+ 11.78	+ 11.60	12	48	30.79
	α Ursæ Minoris S. P.	.....	44.0	.....	13.0	28.0	1	58.80	+ 18.13	.....	+ 11.60	.....	.....	.....
Nov. 11	Sun 1 Limb .....	8.3	22.3	36.4	50.3	4.2	2	36.30	+ 0.63	.....	+ 11.62	15	2	48.55
	Sun 2 Limb .....	24.5	38.3	52.2	6.2	20.1	4	52.26	+ 0.63	.....	+ 11.62	15	5	4.51
INSTRUMENT REVERSED.														
	δ Ursæ Minoris .....	5.0	48.5	33.0	17.0	.....	23	32.62	- 4.12	.....	+ 11.66	.....	.....	.....
	α Lyrae .....	43.7	0.6	17.8	34.7	51.7	31	17.70	+ 0.40	11.82	+ 11.66	18	31	29.76
	β Lyrae .....	25.2	41.1	56.9	12.7	28.6	43	56.90	+ 0.45	11.82	+ 11.66	18	44	9.01
	ι Piscium .....	4.8	18.3	31.6	45.0	58.3	31	31.60	+ 0.64	11.57	+ 11.72	23	31	43.96
	α Andromedæ .....	25.6	41.1	56.2	11.4	26.4	59	56.14	+ 0.49	11.54	+ 11.72	0	0	8.35
	γ Pegasi .....	21.3	34.9	48.5	2.2	16.0	4	48.58	+ 0.58	11.55	+ 11.72	0	5	0.88
	α Ursæ Minoris S. P.	40.0	53.0	5.0	20.0	35.5	2	6.70	+ 9.91	.....	+ 11.87	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nov. 12	Sun 1 Limb .....	11.7	25.8	39.6	53.6	7.6	6	39.66	+ 0.81	.....	+ 11.90	15	6	52.37
	Sun 2 Limb .....	27.8	41.7	55.8	9.7	23.7	8	55.74	+ 0.81	.....	+ 11.90	15	9	8.45
	α Coronæ borealis ....	11.0	26.0	40.8	55.8	10.8	27	40.88	+ 0.54	+ 12.02	+ 11.91	15	27	53.33
	α Serpentis .....	42.8	56.0	9.3	22.6	36.0	36	9.34	+ 0.66	11.99	+ 11.91	15	36	21.91
	ζ Cygni .....	24.2	39.6	54.8	10.2	25.6	5	54.88	+ 0.52	11.82	+ 12.00	21	6	7.40
	Uranus .....	9.1	22.5	35.9	49.3	2.7	56	35.90	+ 0.74	.....	+ 12.04	22	56	48.68
	12 Canum Venat. ....	43.8	1.0	18.2	35.4	52.5	48	18.18	+ 0.38	+ 12.45	+ 12.34	12	48	30.90
	α Ursæ Minoris S. P.	39.0	51.0	6.0	.....	.....	2	6.53	+ 9.07	.....	+ 12.35	.....	.....	.....
Nov. 13	α Lyrae .....	42.8	59.9	16.9	33.9	51.0	31	16.90	+ 0.38	12.60	+ 12.47	18	31	29.75
	ζ Cygni .....	23.6	38.8	54.2	9.5	24.7	5	54.16	+ 0.44	12.60	+ 12.53	21	6	7.13
	α Andromedæ .....	25.1	40.3	55.3	10.5	25.4	59	55.32	+ 0.45	12.38	+ 12.60	0	0	8.37
	α Arietis .....	29.0	43.4	57.9	12.3	26.6	57	57.84	+ 0.49	12.57	+ 12.64	1	58	10.97



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wiros.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Nov. 13	$\alpha$ Ceti.....	16.5	29.8	43.2	56.5	9.7	53	43.14	+ 0.59	+ 12.65	+ 12.66	2 53 56.39
Nov. 15	Sun 1 Limb.....	25.8	39.7	53.8	7.9	21.8	18	53.80	+ 0.79	.....	+ 13.75	15 19 8.34
	$\alpha$ Ursæ Minoris S. P.	34.5	47.0	4.0	17.0	.....	2	2.92	+ 11.01	.....	+ 14.23	13 2 28.16
	$\alpha$ Bootis .....	37.7	51.8	5.8	20.0	34.2	8	5.90	+ 0.56	+ 14.23	+ 14.25	14 8 20.71
Nov. 16	$\delta$ Ursæ Minoris.....	.....	.....	28.5	12.0	55.0	23	28.27	- 4.10	.....	+ 14.33	18 23 38.50
	$\beta$ Lyrae.....	22.6	38.4	54.4	10.2	26.1	43	54.34	+ 0.47	14.29	+ 14.34	18 44 9.15
	$\zeta$ Aquilæ.....	19.9	33.6	47.5	0.9	14.6	57	47.30	+ 0.60	14.37	+ 14.34	18 58 2.24
	$\delta$ Aquilæ .....	43.2	56.6	9.8	23.2	36.5	17	9.86	+ 0.67	14.32	+ 14.35	19 17 24.88
	$\gamma$ Aquilæ .....	56.3	9.8	23.3	36.7	50.3	38	23.28	+ 0.63	14.35	+ 14.35	19 38 38.26
	$\alpha$ Aquilæ .....	15.8	29.2	42.6	56.1	9.5	42	42.64	+ 0.64	14.41	+ 14.35	19 42 57.63
	Uranus.....	0.5	14.0	27.4	40.8	54.5	56	27.44	+ 0.74	.....	+ 14.41	22 56 42.59
	$\phi$ Aquarii.....	20.6	33.9	47.4	0.7	14.2	5	47.36	+ 0.73	.....	+ 14.41	23 6 2.50
	Moon 1 Limb.....	1.2	14.8	28.3	42.0	55.7	37	28.40	+ 0.72	.....	+ 14.42	23 37 43.54
	$\omega$ Piscium.....	24.7	38.0	51.3	4.7	18.2	50	51.38	+ 0.65	.....	+ 14.43	23 51 6.46
	41 Piscium.....	40.8	54.4	7.8	21.3	34.6	12	7.78	+ 0.64	.....	+ 14.43	0 12 22.85
	$\alpha$ Ursæ Minoris.....	.....	11.0	22.0	.....	51.0	2	23.07	- 9.81	.....	+ 14.45	1 2 27.71
	Juno.....	.....	54.4	7.8	21.2	34.7	9	7.81	+ 0.75	.....	+ 14.45	1 9 23.01
Nov. 17	$\omega$ Piscium.....	24.5	37.7	51.1	4.4	17.6	50	51.06	+ 0.72	.....	+ 14.76	23 51 6.54
	$\alpha$ Andromedæ .....	22.6	37.7	52.8	7.8	22.7	59	52.72	+ 0.55	+ 14.85	+ 14.77	0 0 8.04
	$\gamma$ Pegasi .....	17.8	31.5	45.2	58.9	12.6	4	45.20	+ 0.66	14.81	+ 14.77	0 5 0.63
	41 Piscium.....	40.4	53.7	7.2	20.5	33.9	12	7.14	+ 0.71	.....	+ 14.77	0 12 22.62
	Moon 1 Limb.....	33.2	46.8	0.5	14.1	27.7	30	0.46	+ 0.74	.....	+ 14.78	0 30 15.98
	$\beta$ Ceti.....	50.7	4.8	18.8	32.7	46.5	35	18.70	+ 0.91	14.65	+ 14.78	0 35 34.39
	$\epsilon$ Piscium.....	57.1	10.4	23.8	37.2	50.6	54	23.82	+ 0.71	.....	+ 14.79	0 54 39.32
	$\alpha$ Ursæ Minoris.....	55.0	.....	24.5	36.5	51.5	2	23.20	- 11.60	.....	+ 14.79	.....
	Juno .....	34.8	48.4	1.8	15.1	28.7	9	1.76	+ 0.82	.....	+ 14.80	1 9 17.38
	$\theta^1$ Ceti .....	20.1	33.6	47.0	0.4	13.8	15	46.98	+ 0.83	14.81	+ 14.80	1 16 2.61
Nov. 18	$\alpha$ Andromedæ .....	21.8	37.0	52.0	6.8	22.0	59	51.92	+ 0.54	+ 15.64	+ 15.64	0 0 8.10
	$\gamma$ Pegasi .....	16.9	30.6	44.5	58.1	11.8	4	44.38	+ 0.64	15.64	+ 15.64	0 5 0.66
Nov. 19	Sun 1 Limb.....	55.6	9.9	24.0	38.0	52.2	35	23.94	+ 0.86	.....	+ 15.92	15 35 40.72
	Sun 2 Limb.....	13.4	27.4	.....	.....	10.0	37	41.64	+ 0.86	.....	+ 15.92	15 37 58.42
	$\alpha$ Piscium.....	0.3	13.6	27.1	40.5	53.8	31	27.06	+ 0.69	+ 15.99	+ 16.09	23 31 43.84
	$\alpha$ Andromedæ .....	21.5	36.4	51.6	6.6	21.7	59	51.56	+ 0.52	16.02	+ 16.10	0 0 8.18
	$\gamma$ Pegasi .....	16.5	30.2	44.0	57.7	11.3	4	43.94	+ 0.62	16.09	+ 16.11	0 5 0.67
	$\beta$ Ceti.....	49.1	3.2	17.2	31.1	45.2	35	17.16	+ 0.86	16.22	+ 16.12	0 35 34.14
	$\alpha$ Ursæ Minoris.....	53.0	5.0	20.5	34.5	49.5	2	20.50	- 10.90	.....	+ 16.13	.....
	Juno .....	27.7	41.2	54.5	7.9	21.4	8	54.54	+ 0.78	.....	+ 16.13	1 9 11.45
	$\theta^1$ Ceti .....	18.8	32.1	45.6	59.1	12.5	15	45.62	+ 0.78	16.21	+ 16.13	1 16 2.53
	$\beta$ Arietis.....	.....	.....	33.1	47.2	1.5	45	33.13	+ 0.58	.....	+ 16.15	1 45 49.86
	$\theta^1$ Arietis.....	30.6	44.7	58.7	12.7	26.8	8	58.70	+ 0.59	.....	+ 16.15	2 9 15.44
	Moon 1 Limb.....	2.8	17.1	31.7	46.2	0.6	25	31.68	+ 0.61	.....	+ 16.16	2 25 48.45
	$\epsilon$ Arietis .....	20.5	34.6	48.8	2.9	17.2	49	48.80	+ 0.58	.....	+ 16.17	2 50 5.55
	$\delta$ Arietis.....	45.7	59.7	13.8	27.8	41.8	2	13.76	+ 0.59	.....	+ 16.18	3 2 30.53
Nov. 20	Sun 1 Limb.....	5.4	19.7	33.5	47.6	1.7	39	33.58	+ 1.07	.....	+ 16.53	15 39 51.18
	Sun 2 Limb.....	23.2	37.3	51.5	5.5	19.8	41	51.46	+ 1.07	.....	+ 16.53	15 42 9.06
	Mercury 1 Limb.....	38.5	53.3	7.9	22.8	37.5	0	8.00	+ 1.13	.....	+ 16.57	17 0 25.70
	$\alpha$ Herculis.....	34.9	48.8	2.7	16.4	30.0	7	2.56	+ 0.77	+ 16.53	+ 16.57	17 7 19.90
	$\alpha$ Ophiuchi.....	44.6	58.2	11.8	25.4	39.0	27	11.80	+ 0.78	16.63	+ 16.58	17 27 29.16
	$\delta$ Ursæ Minoris.....	57.5	40.5	24.5	8.0	51.0	23	24.30	- 5.92	.....	+ 16.60	18 23 34.98
	$\beta$ Lyrae.....	20.1	35.9	51.9	7.7	23.6	43	51.84	+ 0.58	16.63	+ 16.61	18 44 9.03
	$\zeta$ Aquilæ.....	17.6	31.3	44.8	58.6	12.3	57	44.92	+ 0.77	16.55	+ 16.61	18 58 2.30
	$\gamma$ Aquilæ .....	53.8	7.2	20.8	34.3	47.7	38	20.76	+ 0.80	16.66	+ 16.63	19 38 38.19

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Nov. 20	$\alpha$ Ursæ Minoris.....	s. ....	s. ....	s. 26.0	s. 39.0	s. 53.5	m. 2	s. 24.73	- 14.08	s. ....	s. +16.76	h. m. s. 1 2 27.41
Nov. 21	$\zeta$ Pegasi .....	44.6	57.8	11.4	24.8	38.3	33	11.38	+ 0.71	+16.85	+17.17	22 33 29.26
	$\alpha$ Pegasi .....	2.6	16.4	29.8	43.8	57.6	56	30.04	+ 0.67	17.06	+17.18	22 56 47.89
	$\alpha$ Ursæ Minoris.....	50.0	.....	.....	35.0	48.0	2	19.47	-11.96	.....	+17.23	.....
	$\gamma$ Ceti.....	17.5	30.7	44.0	57.3	10.6	34	44.02	+ 0.76	17.26	+17.28	2 35 2.06
	$\alpha$ Ceti.....	11.5	25.1	38.4	51.6	5.0	53	38.32	+ 0.75	17.36	+17.29	2 53 56.36
	$\eta$ Tauri.....	13.2	27.6	42.2	56.6	11.1	37	42.14	+ 0.60	17.50	+17.31	3 38 0.05
	37 Tauri.....	29.3	43.6	57.8	12.1	26.5	54	57.86	+ 0.61	.....	+17.31	3 55 15.78
	$\nu^1$ Tauri.....	59.0	13.4	27.7	42.2	56.5	16	27.76	+ 0.61	.....	+17.32	4 16 45.69
	Moon 2 Limb .....	3.6	19.1	34.5	50.0	5.4	42	34.52	+ 0.60	.....	+17.34	4 42 52.46
	$\beta$ Tauri.....	23.7	39.0	54.1	9.2	24.3	15	54.06	+ 0.56	17.54	+17.35	5 16 11.97
Nov. 22	26 Aurigæ .....	34.5	49.6	5.0	20.4	36.0	28	5.10	+ 0.54	.....	+17.36	5 28 23.00
	$\alpha$ Ophiuchi.....	43.7	57.2	10.6	24.2	38.0	27	10.74	+ 0.68	+17.79	+17.75	17 27 29.17
	$\delta$ Ursæ Minoris. ....	56.0	39.0	23.5	7.0	50.5	23	23.20	- 4.36	.....	+17.78	18 23 36.62
	$\beta$ Lyræ.....	19.8	34.8	50.6	6.6	22.6	43	50.88	+ 0.54	17.61	+17.79	18 44 9.21
	$\zeta$ Aquilæ.....	16.5	30.2	43.7	57.4	11.2	57	43.80	+ 0.68	17.74	+17.79	18 58 2.27
	$\gamma$ Aquilæ.....	52.6	6.1	19.6	33.1	46.5	38	19.58	+ 0.70	17.92	+17.81	19 38 38.09
	$\alpha$ Aquilæ .....	12.2	25.6	39.1	52.5	5.8	42	39.04	+ 0.71	17.89	+17.81	19 42 57.56
	$\alpha$ Ursæ Minoris .....	48.0	4.0	16.0	31.0	45.5	2	16.90	-10.48	.....	+17.96	1 2 24.38
	Sun 1 Limb.....	.....	.....	.....	21.5	.....	52	7.30	+ 0.96	.....	+18.30	15 52 26.56
	Sun 2 Limb.....	57.6	11.8	26.0	40.2	54.3	54	25.98	+ 0.96	.....	+18.30	15 54 45.24
Nov. 23	$\alpha$ Hereulis .....	33.6	47.1	10.8	14.5	28.3	7	0.86	+ 0.71	+18.30	+18.33	17 7 19.90
	$\alpha$ Ophiuchi .....	42.8	56.5	10.2	23.8	37.4	27	10.14	+ 0.72	18.35	+18.34	17 27 29.20
	$\alpha$ Lyræ.....	36.8	53.8	10.8	27.8	45.0	31	10.84	+ 0.50	18.41	+18.36	18 31 29.70
	$\zeta$ Aquilæ.....	15.8	29.4	43.1	56.7	10.5	57	43.10	+ 0.71	18.41	+18.37	18 58 2.18
	$\gamma$ Aquilæ.....	52.2	5.5	19.1	32.5	46.2	38	19.10	+ 0.74	18.35	+18.39	19 38 38.23
	$\alpha$ Ursæ Minoris. ....	47.0	2.0	16.0	.....	.....	2	16.40	-11.18	.....	+18.51	.....
	$\alpha$ Andromedæ .....	18.0	33.0	48.1	3.3	18.4	59	48.16	+ 0.58	+19.30	+19.39	0 0 8.13
	$\alpha$ Ursæ Minoris .....	42.0	58.0	12.5	26.5	40.0	2	11.80	- 8.27	.....	+19.41	.....
	Juno.....	49.5	.....	.....	29.7	43.1	9	16.29	+ 0.80	.....	+19.41	1 9 36.50
	$\theta^1$ Ceti .....	15.7	28.7	42.5	55.7	9.4	15	42.40	+ 0.80	19.39	+19.41	1 16 2.61
Nov. 25	$\alpha$ Arietis.....	22.0	36.4	50.8	5.2	19.6	57	50.80	+ 0.62	19.50	+19.42	1 58 10.84
	$\gamma$ Ceti.....	15.3	28.5	42.0	55.4	8.5	34	41.94	+ 0.74	19.37	+19.44	2 35 2.12
	$\alpha$ Ceti.....	9.6	22.9	36.2	49.5	2.7	53	36.18	+ 0.73	19.55	+19.44	2 53 56.35
	$\alpha$ Lyræ .....	35.3	52.4	9.4	26.4	43.3	31	9.36	+ 0.52	+19.83	+19.75	18 31 29.63
	$\alpha$ Andromedæ .....	17.4	32.5	47.4	2.7	17.8	59	47.56	+ 0.61	19.86	+19.86	0 0 8.03
	$\gamma$ Pegasi.....	12.6	26.3	40.0	53.7	7.6	4	40.04	+ 0.70	19.86	+19.87	0 5 0.61
	$\alpha$ Ursæ Minoris .....	42.5	57.5	13.0	26.5	41.5	2	12.20	- 9.71	.....	+19.88	.....
	$\alpha$ Arietis.....	21.7	36.0	50.4	4.8	19.4	57	50.46	+ 0.65	19.81	+19.90	1 58 11.01
	$\gamma$ Ceti.....	14.6	28.1	41.4	54.7	8.0	34	41.36	+ 0.77	19.93	+19.91	2 35 2.04
	$\alpha$ Ceti.....	9.3	22.4	35.6	49.1	2.5	53	35.78	+ 0.77	19.91	+19.92	2 53 56.47
Nov. 26	$\alpha$ Lyræ .....	35.3	52.4	9.4	26.4	43.3	31	9.36	+ 0.52	+19.83	+19.75	18 31 29.63
	$\alpha$ Andromedæ .....	17.4	32.5	47.4	2.7	17.8	59	47.56	+ 0.61	19.86	+19.86	0 0 8.03
	$\gamma$ Pegasi.....	12.6	26.3	40.0	53.7	7.6	4	40.04	+ 0.70	19.86	+19.87	0 5 0.61
	$\alpha$ Ursæ Minoris .....	42.5	57.5	13.0	26.5	41.5	2	12.20	- 9.71	.....	+19.88	.....
	$\alpha$ Arietis.....	21.7	36.0	50.4	4.8	19.4	57	50.46	+ 0.65	19.81	+19.90	1 58 11.01
	$\gamma$ Ceti.....	14.6	28.1	41.4	54.7	8.0	34	41.36	+ 0.77	19.93	+19.91	2 35 2.04
	$\alpha$ Ceti.....	9.3	22.4	35.6	49.1	2.5	53	35.78	+ 0.77	19.91	+19.92	2 53 56.47
	Sun 1 Limb.....	35.3	49.5	3.7	18.0	32.2	9	3.74	+ 0.99	.....	+20.20	16 9 24.93
	Sun 2 Limb.....	54.7	9.0	23.4	37.7	52.0	11	23.36	+ 0.99	.....	+20.20	16 11 44.55
	$\alpha$ Ophiuchi.....	41.0	54.6	8.2	21.8	35.4	27	8.20	+ 0.74	+20.27	+20.22	17 27 29.16
Nov. 27	$\delta$ Ursæ Minoris.....	53.0	36.0	19.5	2.5	46.0	23	19.40	- 4.30	.....	+20.23	.....
	$\beta$ Lyræ.....	16.4	32.3	48.3	4.1	19.9	43	48.20	+ 0.59	20.19	+20.24	18 44 9.03
	$\zeta$ Aquilæ.....	13.8	27.5	41.3	54.8	8.5	57	41.18	+ 0.74	20.27	+20.24	18 58 2.16
	$\gamma$ Aquilæ .....	50.2	3.7	17.2	30.7	44.2	38	17.20	+ 0.76	20.19	+20.25	19 38 38.21
	$\alpha$ Aquilæ .....	9.7	23.1	36.6	50.0	3.4	42	36.56	+ 0.77	20.26	+20.25	19 42 57.58
	$\zeta$ Cygni .....	15.6	30.8	46.0	1.2	16.5	5	46.02	+ 0.68	+20.26	+20.26	21 6 6.96
	$\beta$ Aquarii .....	19.7	32.8	46.2	59.5	13.0	22	46.24	+ 0.97	20.33	+20.26	21 23 7.47
	$\alpha$ Cygni .....	15.6	30.8	46.0	1.2	16.5	5	46.02	+ 0.68	+20.26	+20.26	21 6 6.96
	$\beta$ Aquarii .....	19.7	32.8	46.2	59.5	13.0	22	46.24	+ 0.97	20.33	+20.26	21 23 7.47
	$\alpha$ Cygni .....	15.6	30.8	46.0	1.2	16.5	5	46.02	+ 0.68	+20.26	+20.26	21 6 6.96
	$\beta$ Aquarii .....	19.7	32.8	46.2	59.5	13.0	22	46.24	+ 0.97	20.33	+20.26	21 23 7.47



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	interpo- lated.	
Nov. 28	$\epsilon$ Pegasi.....	31.1	44.7	58.2	11.6	25.0	35	58.12	+ 0.85	+20.24	+20.26	21 36 19.23
	$\alpha$ Aquarii.....	45.8	59.2	12.4	25.6	39.0	57	12.40	+ 0.93	20.32	+20.26	21 57 33.59
	$\zeta$ Pegasi.....	41.0	54.4	7.7	21.5	34.8	33	7.88	+ 0.84	20.14	+20.27	22 33 28.99
	$\alpha$ Ursæ Minoris.....	44.0	58.0	13.5	28.0	44.0	2	13.50	-12.19	.....	+20.29	.....
Nov. 30	$\zeta$ Cygni.....	.....	29.3	44.4	59.6	15.1	5	44.46	+ 0.71	+21.76	+21.68	21 6 6.85†
	$\alpha$ Arietis.....	19.5	34.0	48.4	2.7	17.1	57	48.34	+ 0.77	21.80	+21.75	1 58 10.86†
	$\eta$ Tauri.....	8.7	23.3	38.0	52.3	6.7	37	37.80	+ 0.77	21.76	+21.83	3 38 0.40†
Dec. 2	$\alpha$ Cygni.....	56.5	.....	.....	52.6	11.4	35	33.94	+ 0.58	+22.83	+22.83	.....†
Dec. 5	$\alpha$ Lyrae.....	30.6	47.6	4.7	.....	.....	31	4.63	+ 0.64	+24.37	+24.33	18 31 29.60†
	$\zeta$ Aquilæ.....	.....	.....	.....	50.6	4.4	57	37.00	+ 0.88	24.29	+24.33	18 58 2.21†
Dec. 6	Sun 1 Limb.....	.....	.....	.....	7.5	22.0	47	53.14	+ 1.19	.....	+24.33	16 48 18.66
	Sun 2 Limb.....	45.1	59.6	13.8	28.2	43.0	50	13.94	+ 1.19	.....	+24.33	16 50 39.46
	$\alpha$ Ophiuchi.....	36.8	50.5	4.1	17.6	31.4	27	4.08	+ 0.89	+24.28	+24.34	17 27 29.31
	$\alpha$ Lyrae.....	30.7	47.7	4.8	21.8	38.8	31	4.76	+ 0.64	24.24	+24.36	18 31 29.76
	$\alpha$ Aquilæ.....	5.3	18.7	32.2	45.6	59.1	42	32.18	+ 0.92	24.44	+24.38	19 42 57.48
	$\alpha$ Cygni.....	54.9	13.5	32.3	50.9	9.6	35	32.24	+ 0.58	24.45	+24.40	20 35 57.22
	$\zeta$ Cygni.....	.....	26.4	41.6	56.8	12.1	5	41.59	+ 0.74	24.51	+24.41	21 6 6.74
Dec. 7	Sun 1 Limb.....	45.8	0.2	14.4	28.8	43.1	52	14.46	+ 1.24	.....	+24.85	16 52 40.55
	Sun 2 Limb.....	6.8	21.1	35.6	50.1	4.6	54	35.64	+ 1.24	.....	+24.85	16 55 1.73
	$\alpha$ Ophiuchi.....	36.2	49.8	3.4	17.2	30.8	27	3.48	+ 0.94	+24.83	+24.86	17 27 29.28
	$\delta$ Ursæ Minoris.....	46.0	.....	12.0	56.0	39.5	23	12.48	- 5.43	.....	+24.88	18 23 31.93
	$\beta$ Lyrae.....	11.5	27.4	43.2	59.1	15.1	43	43.26	+ 0.76	24.89	+24.89	18 44 8.91
	$\zeta$ Aquilæ.....	8.8	22.6	36.4	50.0	3.7	57	36.30	+ 0.93	24.93	+24.90	18 58 2.13
	$\alpha$ Aquilæ.....	4.7	18.2	31.6	45.2	58.5	42	31.64	+ 0.97	24.92	+24.91	19 42 57.52
	$\alpha$ Cygni.....	54.4	13.0	31.7	50.4	9.0	35	31.70	+ 0.61	24.94	+24.93	20 35 57.24
	$\alpha$ Ursæ Minoris.....	35.5	49.0	5.0	21.0	35.5	2	5.20	-13.20	.....	+25.03	1 2 17.03
	INSTRUMENT REVERSED.											
Dec. 11												
Dec. 13	$\alpha$ Pegasi.....	51.4	5.0	18.8	32.5	46.2	56	18.78	+ 0.68	+28.05	+28.05	.....
	Moon 1 Limb.....	.....	.....	23.8	.....	51.0	17	23.76	+ 0.83	.....	+28.06	23 17 52.65
Dec. 14	$\alpha$ Lyrae.....	26.9	43.8	0.9	18.0	35.0	31	0.92	+ 0.38	+28.33	+28.33	.....
Dec. 15	Moon 1 Limb.....	52.2	6.2	.....	.....	.....	59	19.92	+ 0.67	.....	+29.12	0 59 49.71
	$\alpha$ Ursæ Minoris.....	.....	.....	.....	14.0	30.5	1	59.35	-17.42	.....	+29.12	.....
	$\eta$ Piscium.....	59.3	13.0	26.7	40.5	54.3	22	26.76	+ 0.61	.....	+29.13	1 22 56.50
Dec. 16	$\zeta$ Cygni.....	6.2	21.3	36.7	52.0	7.3	5	36.70	+ 0.44	+29.59	+29.62	21 6 6.76
	$\alpha$ Tauri.....	48.2	2.1	15.9	29.7	43.5	26	15.88	+ 0.56	29.81	+29.81	4 26 46.25
	$\alpha$ Aurigæ.....	46.6	5.7	24.7	43.8	2.8	4	24.72	+ 0.24	29.88	+29.82	5 4 54.78
	$\beta$ Orionis.....	55.2	8.5	22.1	35.4	49.0	6	22.04	+ 0.72	29.84	+29.82	5 6 52.58
	$\beta$ Tauri.....	12.3	27.2	42.4	57.5	12.6	15	42.40	+ 0.46	29.76	+29.83	5 16 12.69
Dec. 17	(a) $\alpha$ Andromedæ.....	7.1	22.3	37.4	52.5	7.5	59	37.36	+ 0.12	+30.29	+30.29	.....
Dec. 18	$\alpha$ Aurigæ.....	45.9	5.0	24.0	43.2	2.3	4	24.08	+ 0.07	+30.72	+30.75	5 4 54.90
	$\beta$ Orionis.....	55.0	8.5	21.8	35.2	48.5	6	21.80	+ 0.14	30.68	+30.75	5 6 52.69
	$\beta$ Tauri.....	11.5	26.6	41.7	56.8	11.9	15	41.70	+ 0.12	30.82	+30.75	5 16 12.57
	$\delta$ Orionis.....	54.0	7.5	20.8	34.0	47.3	23	20.72	+ 0.14	30.77	+30.75	5 23 51.61
	$\epsilon$ Orionis.....	9.8	23.1	36.5	49.8	3.0	27	36.44	+ 0.14	30.78	+30.75	5 28 7.33

(a) The Instrument was moved in azimuth to bring it nearer the Meridian.

Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.		
		I.	II.	III.	IV.	V.				observed.	inter- polated.			
Dec. 19	Sun 2 Limb.....	s. ....	s. 15.2	s. 29.8	s. 44.2	s. 59.0	m. 47	s. 29.80	+ 0.09	.....	+ 30.96	h. 17	m. 48	s. 0.85
Dec. 20	$\alpha$ Tauri.....	46.9	0.8	14.8	28.5	42.2	26	14.64	+ 0.08	+ 31.55	+ 31.59	4	26	46.31
	$\alpha$ Aurigæ.....	45.0	4.0	23.1	42.2	1.3	4	23.12	+ 0.03	31.74	+ 31.60	5	4	54.75
	$\beta$ Orionis.....	54.2	7.5	21.0	34.4	47.8	6	20.98	+ 0.07	31.58	+ 31.60	5	6	52.65
	$\beta$ Tauri.....	10.8	26.0	41.1	56.2	11.2	15	41.06	+ 0.06	31.54	+ 31.61	5	16	12.73
	$\delta$ Ursæ Minoris S. P.	31.0	14.0	56.5	.....	.....	22	57.10	+ 1.87	.....	+ 31.62	.....	.....	.....
Dec. 21	Sun 1 Limb.....	30.5	45.0	59.5	14.0	28.6	53	59.52	- 0.02	.....	+ 31.81	17	54	31.31
	Sun 2 Limb.....	52.9	7.5	22.0	36.5	51.1	56	22.00	- 0.02	.....	+ 31.81	17	56	53.79
	$\delta$ Ursæ Minoris.....	.....	.....	59.5	43.5	27.0	23	0.07	- 1.39	.....	+ 31.82	.....	.....	.....
	$\zeta$ Aquilæ.....	3.1	16.7	30.4	44.1	57.5	57	30.36	+ 0.01	+ 31.82	+ 31.83	18	58	2.20
	$\alpha$ Cygni.....	47.8	6.6	25.3	44.0	2.7	35	25.28	- 0.02	31.80	+ 31.86	20	35	57.12
	$\zeta$ Cygni.....	4.1	19.5	34.7	50.0	5.4	5	34.74	0.00	31.94	+ 31.87	21	6	6.61
	$\beta$ Aquarii.....	8.6	22.1	35.5	48.8	2.2	22	35.44	0.00	31.92	+ 31.87	21	23	7.31
	$\tau$ Geminorum.....	.....	.....	26.6	42.1	57.5	0	26.66	0.00	.....	+ 32.04	7	0	58.70
	$\delta$ Geminorum.....	.....	.....	3.4	.....	32.2	10	3.46	0.00	32.00	+ 32.04	7	10	35.50
	$\alpha$ Geminorum preced.	20.8	.....	52.3	.....	23.7	23	52.27	0.00	} 32.07 {	+ 32.05	7	24	24.32
	$\alpha$ Geminorum follow.	.....	37.1	.....	8.5	.....	23	52.80	0.00		+ 32.05	7	24	24.85
	Moon 2 Limb.....	50.5	5.7	20.8	36.0	51.2	33	20.84	0.00	.....	+ 32.05	7	33	52.89
Dec. 22	$\alpha$ Ophiuchi.....	29.6	43.2	56.8	10.4	24.0	26	56.80	- 0.08	+ 32.72	+ 32.70	17	27	29.42
Dec. 23	Sun 1 Limb.....	23.0	37.4	52.0	6.5	21.1	2	52.00	- 0.18	.....	+ 32.71	18	3	24.53
	Sun 2 Limb.....	45.4	59.8	14.4	28.8	43.4	5	14.36	- 0.18	.....	+ 32.71	18	5	46.89
	$\delta$ Ursæ Minoris.....	31.0	14.0	57.0	41.0	25.0	22	57.60	+ 0.01	.....	+ 32.72	.....	.....	.....
	$\beta$ Lyrae.....	4.5	20.4	36.4	52.3	8.2	43	36.36	- 0.06	32.62	+ 32.72	18	44	9.02
	$\gamma$ Aquilæ.....	38.5	52.0	5.5	19.0	32.6	38	5.52	- 0.09	32.66	+ 32.74	19	38	38.17
	$\alpha$ Aquilæ.....	58.1	11.4	24.8	38.2	51.6	42	24.82	- 0.09	32.79	+ 32.74	19	42	57.47
	$\alpha$ Cygni.....	47.0	5.7	24.4	43.1	1.8	35	24.40	- 0.04	32.67	+ 32.75	20	35	57.11
	$\alpha$ Pegasi.....	47.0	0.8	14.5	28.2	42.0	56	14.50	- 0.08	32.99	+ 32.79	22	56	47.21
Dec. 24	$\iota$ Piscium.....	43.6	57.0	10.3	23.6	37.0	31	10.30	- 0.05	+ 33.14	+ 33.09	23	31	43.34
	$\alpha$ Andromedæ.....	4.3	19.4	34.5	49.7	4.6	59	34.50	- 0.02	33.20	+ 33.09	0	0	7.57
	$\gamma$ Pegasi.....	59.9	13.4	27.2	41.1	54.6	4	27.24	- 0.03	33.10	+ 33.10	0	5	0.31
	$\alpha$ Ursæ Minoris.....	1.0	17.0	32.0	47.5	2.5	1	32.00	- 0.31	.....	+ 33.10	.....	.....	.....
	$\theta^1$ Ceti.....	2.6	15.9	29.4	43.0	56.3	15	29.44	- 0.08	33.02	+ 33.11	1	16	2.47
	Juno.....	14.5	27.7	41.2	51.5	8.0	25	41.18	- 0.07	.....	+ 33.11	1	26	14.22
	$\alpha$ Arietis.....	9.0	23.4	37.7	52.2	6.5	57	37.76	- 0.03	33.06	+ 33.11	1	58	10.84
	A. S. C. 315.....	42.1	.....	.....	.....	35.6	47	8.85	- 0.05	.....	+ 33.12	2	47	41.92
	.....	.....	55.0	8.5	22.0	.....	.....	8.50	- 0.05	.....	.....	.....	.....	.....
	$\lambda$ Ceti.....	9.5	.....	.....	.....	3.4	50	36.45	- 0.05	.....	.....	.....	.....	.....
	.....	.....	23.5	36.9	50.4	.....	.....	36.93	- 0.05	.....	+ 33.12	2	51	10.00
Dec. 25	Sun 1 Limb.....	15.4	30.1	44.6	59.0	13.7	11	44.56	- 0.10	.....	+ 33.23	18	12	17.69
	Sun 2 Limb.....	37.8	52.5	6.8	21.5	36.0	14	6.92	- 0.10	.....	+ 33.23	18	14	40.05
	$\delta$ Ursæ Minoris.....	.....	14.5	57.0	40.5	24.0	22	57.40	- 0.61	.....	+ 33.24	.....	.....	.....
	$\zeta$ Aquilæ.....	1.6	15.4	29.0	42.8	56.4	57	29.04	- 0.04	+ 33.21	+ 33.24	18	58	2.24
	$\gamma$ Aquilæ.....	37.9	51.4	5.0	18.4	31.8	38	4.90	- 0.05	33.24	+ 33.25	19	38	38.10
	$\alpha$ Aquilæ.....	57.5	10.8	24.3	37.6	51.2	42	24.28	- 0.05	33.29	+ 33.25	19	42	57.48
	$\beta$ Aquilæ.....	26.4	39.6	53.0	6.4	19.7	46	53.02	- 0.05	33.23	+ 33.25	19	47	26.22
	$\alpha$ Cygni.....	46.2	5.0	23.8	42.6	1.3	35	23.78	- 0.03	33.26	+ 33.26	20	35	57.01
	Uranus.....	21.3	34.8	48.2	1.6	15.2	57	48.20	- 0.07	.....	+ 33.29	22	58	21.42
Dec. 26	Sun 1 Limb.....	41.6	56.2	10.7	25.1	39.6	16	10.64	- 0.08	.....	+ 33.61	18	16	44.17
	Sun 2 Limb.....	4.0	18.6	33.0	47.5	2.0	18	33.02	- 0.08	.....	+ 33.61	18	19	6.55
	$\delta$ Ursæ Minoris.....	.....	.....	56.5	40.0	24.0	22	56.93	- 0.41	.....	+ 33.61	18	23	30.13
	$\beta$ Lyrae.....	3.6	19.4	35.4	51.3	7.1	43	35.36	+ 0.01	+ 33.57	+ 33.62	18	44	8.99



Date.	OBJECT OBSERVED.	Wire.					Reduction to Mean of Wires.		Correction of Instru- ment.	Correction of Clock		Apparent Right Ascension observed.
		I.	II.	III.	IV.	V.				observed.	inter- polated.	
Dec: 26	$\gamma$ Aquilæ.....	37.5	51.0	4.5	18.1	31.5	38	4.52	- 0.02	+ 33.59	+ 33.63	19 38 38.13
	$\alpha$ Aquilæ.....	57.1	10.4	24.0	37.3	50.6	42	23.88	- 0.02	33.66	+ 33.64	19 42 57.50
	$\alpha$ Cygni.....	45.9	4.6	23.2	42.0	0.8	35	23.30	+ 0.01	33.69	+ 33.65	20 35 56.96
	$\zeta$ Cygni.....	2.4	17.6	33.0	48.2	3.5	5	32.94	0.00	33.70	+ 33.66	21 6 6.60
	$\alpha$ Ursæ Minoris.....	1.5	16.0	31.0	44.5	0.0	1	30.60	- 1.03	.....	+ 33.74	1 2 3.31
	Moon 2 Limb.....	.....	.....	.....	.....	5.8	56	38.64	0.00	.....	+ 34.09	11 57 12.73
Dec. 27	$\alpha$ Cygni.....	45.1	4.0	22.8	41.7	0.4	35	22.80	+ 0.03	+ 34.16	+ 34.25	20 35 57.08
	$\alpha$ Pegasi.....	45.7	49.4	12.9	26.6	40.4	56	13.00	+ 0.02	34.35	+ 34.28	22 56 47.30
	Uranus.....	33.0	46.5	59.8	13.0	26.5	57	59.76	- 0.01	.....	+ 34.28	22 58 34.03
	$\iota$ Piscium.....	42.5	55.8	9.1	22.3	35.7	31	9.08	+ 0.01	34.27	+ 34.29	23 31 43.38
	$\alpha$ Andromedæ.....	3.2	18.3	33.1	48.3	3.4	59	33.26	+ 0.03	34.35	+ 34.29	0 0 7.58
	$\gamma$ Pegasi.....	58.6	12.4	26.1	39.5	53.4	4	26.00	+ 0.02	34.26	+ 34.29	0 5 0.31
	$\alpha$ Ursæ Minoris.....	0.5	15.5	30.5	44.0	58.0	1	29.70	- 1.37	.....	+ 34.30	.....
	Juno.....	10.0	23.4	36.6	49.9	3.4	28	36.66	- 0.01	.....	+ 34.31	1 29 10.96
	21 Virginis.....	30.2	43.8	57.2	10.5	24.2	24	57.18	+ 0.18	.....	+ 34.27	12 25 31.63
	(a) Moon 1 Limb.....	34.8	48.2	2.0	16.0	.....	39	2.10	+ 0.19	.....	+ 34.27	12 39 36.56
	Moon 2 Limb.....	38.8	52.4	6.2	20.0	33.8	41	6.24	+ 0.19	.....	+ 34.27	12 41 40.70
	$\alpha$ Ursæ Minoris S. P.....	53.0	.....	23.5	.....	.....	1	23.50	+ 4.40	.....	+ 34.28	13 2 2.18
	Mercury 2 Limb.....	13.4	27.8	42.0	56.2	10.5	8	41.98	+ 0.17	.....	+ 34.33	17 9 16.48
	$\delta$ Ursæ Minoris.....	30.0	14.0	57.5	.....	24.5	22	57.38	- 1.55	.....	+ 34.35	18 23 30.18
Dec. 28	Sun 1 Limb.....	33.4	47.8	2.4	16.9	31.2	25	2.34	+ 0.17	.....	+ 34.35	18 25 36.86
	Sun 2 Limb.....	55.7	10.2	24.6	39.2	53.8	27	24.70	+ 0.17	.....	+ 34.35	18 27 59.22
	$\beta$ Lyrae.....	2.6	18.6	34.5	50.4	6.2	43	34.46	+ 0.16	+ 34.33	+ 34.36	18 44 8.98
	$\gamma$ Aquilæ.....	36.5	50.1	3.5	17.0	30.6	38	3.54	+ 0.18	34.38	+ 34.37	19 38 38.09
	$\alpha$ Aquilæ.....	56.0	9.5	23.0	36.4	49.8	42	22.94	+ 0.18	34.41	+ 34.38	19 42 57.50
	$\alpha$ Cygni.....	45.3	3.7	22.5	41.1	59.8	35	22.48	+ 0.14	34.36	+ 34.39	20 35 57.01
	$\zeta$ Cygni.....	1.5	16.7	32.0	47.4	2.6	5	32.04	+ 0.17	34.42	+ 34.40	21 6 6.61
	Uranus.....	38.7	52.5	5.6	19.2	32.4	58	5.68	+ 0.18	.....	+ 34.45	22 58 40.31
	$\alpha$ Ursæ Minoris.....	0.5	16.0	30.5	45.0	3.0	1	31.00	- 3.80	.....	+ 34.50	1 2 1.70
	Juno.....	11.1	24.5	37.7	51.1	4.4	29	37.76	+ 0.18	.....	+ 34.51	1 30 12.45
	49 Virginis.....	29.2	42.6	56.2	9.7	23.1	58	56.16	+ 0.15	.....	+ 34.93	12 59 31.24
	$\alpha$ Ursæ Minoris S. P.....	.....	6.0	22.0	36.0	52.5	1	21.38	+ 5.11	.....	+ 34.93	.....
	$\alpha$ Virginis.....	44.1	57.6	11.1	24.7	38.2	16	11.14	+ 0.15	+ 34.94	+ 34.94	13 16 46.23
	(a) Moon 1 Limb.....	22.4	36.3	50.2	4.3	18.1	23	50.26	+ 0.16	.....	+ 34.95	13 24 25.37
	Moon 2 Limb.....	27.7	41.8	55.8	10.0	24.1	25	55.88	+ 0.16	.....	+ 34.95	13 26 30.99
	89 Virginis.....	8.0	22.1	36.1	50.0	3.8	40	36.00	+ 0.14	.....	+ 34.95	13 41 11.09
	$\alpha$ Bootis.....	18.5	32.6	46.8	0.8	15.0	7	46.74	+ 0.14	34.89	+ 34.97	14 8 21.85
	$\epsilon$ Bootis.....	54.4	9.5	24.4	39.5	54.6	37	24.48	+ 0.13	34.98	+ 34.98	14 37 59.59
	$\alpha^2$ Libræ.....	59.0	12.6	26.5	40.3	54.1	41	26.50	+ 0.15	35.08	+ 34.99	14 42 1.64
Dec. 29	89 Virginis.....	7.2	21.3	35.2	49.2	3.0	40	35.18	+ 0.14	.....	+ 35.69	13 41 11.01
	$\eta$ Bootis.....	59.8	13.8	28.0	42.1	56.2	46	27.98	+ 0.14	+ 35.86	+ 35.70	13 47 3.82
	$\alpha$ Bootis.....	17.8	31.9	46.1	0.3	14.5	7	46.12	+ 0.14	35.55	+ 35.70	14 8 21.96
Dec. 31	Uranus.....	57.9	11.3	24.7	37.9	51.5	58	24.66	+ 0.15	.....	+ 36.32	22 59 1.13
	$\gamma$ Ceti.....	59.0	12.2	25.5	38.7	52.1	34	25.50	+ 0.15	+ 36.31	+ 36.36	2 35 2.01
	$\alpha$ Ceti.....	53.3	6.6	20.0	33.2	46.4	53	19.90	+ 0.15	36.36	+ 36.36	2 53 56.41
	$\eta$ Tauri.....	55.1	9.4	23.8	38.4	52.8	37	23.90	+ 0.14	36.36	+ 36.37	3 38 0.41
	$\gamma^1$ Eridani.....	31.4	45.2	59.0	12.6	26.2	49	58.88	+ 0.15	36.40	+ 36.37	3 50 35.40
	$\alpha$ Tauri.....	42.2	56.0	9.7	23.6	37.3	26	9.76	+ 0.14	36.39	+ 36.37	4 26 46.27

(a) Dark or unenlightened Limb.





ELEMENTS  
FOR  
REDUCING THE OBSERVATIONS  
MADE WITH  
THE TRANSIT INSTRUMENT;  
AND  
MEAN RIGHT ASCENSIONS OF THE STARS OBSERVED,  
FOR JANUARY 1, 1839.

### OBSERVATIONS OF MERIDIAN MARKS.

Date.	Wire III. East of		Sum.	Illuminated End of Axis.	Date.	Wire III. East of		Sum.	Illuminated End of Axis.
	North mark.	South mark.				North mark.	South mark.		
1838, Dec. 4	<i>s.</i> - 1.21	<i>s.</i> .....	<i>s.</i> .....	East	1839, June 30	<i>s.</i> - 0.96	<i>s.</i> + 1.43	<i>s.</i> + 0.47	East
10	- 1.24	+ 1.63	+ 0.39	.....	July 3	- 0.86	+ 1.38	+ 0.52	.....
21	- 1.35	.....	.....	.....	4	- 0.81	+ 1.36	+ 0.55	.....
25	- 1.29	.....	.....	.....	5	- 0.85	+ 1.35	+ 0.50	.....
29	- 1.38	.....	.....	.....	8	- 0.83	+ 1.31	+ 0.48	.....
30	- 1.27	+ 1.67	+ 0.40	.....	15	- 0.81	+ 1.29	+ 0.48	.....
1839, Jan. 3	- 1.36	+ 1.69	+ 0.33	.....	19	- 0.81	+ 1.28	+ 0.47	.....
4	.....	+ 1.67	.....	.....	22	- 0.80	+ 1.29	+ 0.49	.....
7	- 1.41	+ 1.79	+ 0.38	.....			Mean	+ 0.489	
		Mean	+ 0.375						
7	- 1.62	+ 1.59	- 0.03	West	31	- 1.15	+ 1.09	- 0.06	West
11	- 1.72	+ 1.68	- 0.04	.....	Sept. 16	- 1.21	+ 1.19	- 0.02	.....
15	- 1.59	.....	.....	.....			Mean	- 0.040	
25	- 1.61	.....	.....	.....	29	- 1.08	+ 1.52	+ 0.44	East
Feb. 6	- 1.67	.....	.....	.....	Oct. 9	- 1.21	+ 1.67	+ 0.46	.....
8	- 1.53	.....	.....	.....	10	- 1.19	+ 1.63	+ 0.44	.....
9	- 1.47	+ 1.48	+ 0.01	.....	13	- 1.14	.....	.....	.....
		Mean	- 0.020				Mean	+ 0.447	
9	- 1.31	+ 1.67	+ 0.36	East	14	- 1.39	.....	.....	West
11	- 1.29	+ 1.65	+ 0.36	.....	15	- 1.35	.....	.....	.....
16	- 1.25	+ 1.63	+ 0.38	.....	16	- 1.41	+ 1.40	- 0.01	.....
20	- 1.49	+ 1.89	+ 0.40	.....	17	- 1.41	.....	.....	.....
March 6	.....	+ 1.68	.....	.....	20	- 1.50	.....	.....	.....
		Mean	+ 0.375		22	- 1.43	.....	.....	.....
16	- 1.58	.....	.....	West	23	- 1.41	.....	.....	.....
29	- 1.55	.....	.....	.....	24	- 1.35	.....	.....	.....
April 29	- 1.10	+ 1.52	+ 0.42	East	25	- 1.37	.....	.....	.....
May 19	- 1.18	+ 1.59	+ 0.41	.....	27	- 1.45	.....	.....	.....
21	- 1.07	.....	.....	.....	28	- 1.51	+ 1.51	0.00	.....
		Mean	+ 0.415		29	- 1.53	+ 1.52	- 0.01	.....
29	- 1.28	.....	.....	West	30	- 1.56	+ 1.55	- 0.01	.....
June 7	- 1.16	.....	.....	.....	31	- 1.56	+ 1.57	+ 0.01	.....
8	- 1.15	+ 1.06	- 0.09	.....	Nov. 2	- 1.56	+ 1.56	0.00	.....
8	- 1.17	+ 1.09	- 0.08	.....	5	- 1.51	.....	.....	.....
9	- 1.18	+ 1.07	- 0.11	.....	6	- 1.51	.....	.....	.....
9	- 1.12	+ 1.01	- 0.11	.....	7	- 1.52	.....	.....	.....
11	- 1.13	+ 1.04	- 0.09	.....	8	- 1.51	+ 1.54	+ 0.03	.....
17	- 0.96	+ 0.83	- 0.13	.....	10	- 1.46	.....	.....	.....
19	- 1.15	+ 1.01	- 0.14	.....			Mean	+ 0.001	
21	- 1.07	+ 0.91	- 0.16	.....					
		Mean	- 0.114		12	- 1.23	.....	.....	East
27	- 0.89	+ 1.33	+ 0.44	East	14	- 1.21	.....	.....	.....
					15	- 1.16	.....	.....	.....
					19	- 1.20	+ 1.57	+ 0.37	.....
					21	- 1.25	+ 1.65	+ 0.40	.....
					22	- 1.27	.....	.....	.....
					24	- 1.33	+ 1.70	+ 0.37	.....
					25	- 1.24	.....	.....	.....



Date.	Wire III. East of		Sum.	Illuminated End of Axis.	Date.	Wire III. East of		Sum.	Illuminated End of Axis.
	North mark.	South mark.				North mark.	South mark.		
1839, Nov. 29	<sup>s.</sup> - 1.49	<sup>s.</sup> + 1.87	<sup>s.</sup> + 0.38	East	1839, Dec. 25	<sup>s.</sup> - 0.66	.....	<sup>s.</sup> .....	West
30	- 1.44	.....	.....	.....	28	- 0.95	.....	.....	.....
Dec. 8	- 1.47	.....	.....	.....	1840, Jan. 3	- 0.83	.....	.....	.....
		Mean	+ 0.380		9	- 0.97	.....	.....	.....
12	- 1.63	.....	.....	West	13	- 0.78	.....	.....	.....
17	- 1.53	.....	.....	.....(a)	14	- 0.81	.....	.....	.....
18	- 0.87	+ 0.92	+ 0.05	.....	17	- 0.70	.....	.....	.....
21	- 0.72	.....	.....	.....	18	- 0.83	+ 0.77	- 0.06	.....
24	- 0.67	+ 0.66	- 0.01	.....			Mean	- 0.007	

(a) After this observation the Instrument was moved in azimuth.

## INCLINATION OF AXIS.

Date.	West End high.	Thermo- meter.	Determined by	Date.	West End high.	Thermo- meter.	Determined by
1838, December 31	<sup>s.</sup> + 0.174	35.4	Therm.	1839, July 2	<sup>s.</sup> - 0.034	.....	Level
1839, January 7	+ 0.145	36.0	Therm.	8	- 0.112	59.2	Therm.
14	+ 0.131	37.3	Therm.	15	- 0.059	54.4	Therm.
21	+ 0.168	34.0	Therm.	22	- 0.079	56.2	Therm.
23	+ 0.186	.....	Level	26	- 0.123	.....	Level
28	+ 0.192	31.8	Therm.	29	- 0.084	56.7	Therm.
February 4	+ 0.165	34.2	Therm.	August 5	- 0.099	58.0	Therm.
11	+ 0.107	39.5	Therm.	12	- 0.058	54.3	Therm.
18	+ 0.190	32.0	Therm.	19	- 0.007	49.7	Therm.
25	+ 0.166	34.1	Therm.	26	- 0.059	54.4	Therm.
28	+ 0.153	.....	Level	September 2	- 0.048	53.4	Therm.
March 4	+ 0.139	36.6	Therm.	9	- 0.057	54.2	Therm.
11	+ 0.199	31.2	Therm.	13	- 0.023	.....	Level
18	+ 0.164	33.6	Level	16	- 0.032	52.0	Therm.
25	+ 0.143	36.2	Therm.	23	- 0.016	50.5	Therm.
April 1	+ 0.151	35.5	Therm.	30	- 0.001	49.2	Therm.
8	+ 0.148	35.8	Therm.	October 7	+ 0.030	46.4	Therm.
15	+ 0.083	41.6	Therm.	11	+ 0.009	.....	Level
16	+ 0.057	.....	Level	14	+ 0.007	48.5	Therm.
22	+ 0.059	43.8	Therm.	21	+ 0.037	45.8	Therm.
29	+ 0.018	47.5	Therm.	28	+ 0.088	43.6	Level
May 6	+ 0.061	43.6	Therm.	November 4	+ 0.057	44.0	Therm.
10	+ 0.100	.....	Level	11	+ 0.046	45.0	Therm.
13	+ 0.051	44.5	Therm.	12	+ 0.053	.....	Level
20	+ 0.006	48.6	Therm.	18	+ 0.058	43.9	Therm.
27	- 0.028	51.6	Therm.	25	+ 0.107	39.5	Therm.
June 3	+ 0.010	48.2	Therm.	December 2	+ 0.159	34.8	Therm.
10	- 0.071	53.8	Level	9	+ 0.173	33.5	Therm.
17	- 0.100	58.1	Therm.	11	+ 0.170	.....	Level
24	- 0.065	55.0	Therm.	16	+ 0.118	38.5	Therm.
July 1	- 0.049	53.5	Therm.	23	+ 0.079	42.0	Therm.
				31	+ 0.130	37.4	Therm.

DEVIATION OF THE INSTRUMENT FROM THE POLE, OR THE QUANTITY  $n$ , DEDUCED FROM  
OBSERVATIONS.

Date.	OBJECTS.	$n =$	Date.	OBJECTS.	$n =$
1839, Jan. 1	$\alpha$ Ursæ Minoris.....	$^{\circ}$ - 0.37	1839, Jan. 27	$\mu$ Geminorum.....	$^{\circ}$ - 0.38
	$\delta$ Ursæ Minoris S. P. ....			$\delta$ Ursæ Minoris S.P.....	
	$\delta$ Ursæ Minoris .....	- 0.36	28	$\alpha$ Ursæ Minoris.....	- 0.43
2	$\delta$ Ursæ Minoris S. P. ....			$\delta$ Ursæ Minoris S.P.....	
3	$\alpha$ Ursæ Minoris.....	- 0.36	29	$\delta$ Orionis.....	- 0.43
	$\theta^1$ Ceti.....			$\delta$ Ursæ Minoris S. P. ....	
4	$\alpha$ Cygni.....	- 0.37	30	$\mu$ Geminorum.....	- 0.57
	$\alpha$ Ursæ Minoris.....			$\delta$ Ursæ Minoris S.P.....	
7	$\alpha$ Ursæ Minoris.....	- 0.38 (a)	31	$\alpha$ Ursæ Minoris.....	- 0.49
	$\delta$ Ursæ Minoris S.P.....			$\theta^1$ Ceti.....	
	$\alpha$ Ursæ Minoris S.P.....				
8	$\alpha$ Aquilæ .....	- 0.40	Feb. 1	$\delta$ Ursæ Minoris .....	
	$\alpha$ Pegasi.....			$\zeta$ Cygni .....	- 0.47
	$\delta$ Ursæ Minoris S. P. ....			$\alpha$ Ursæ Minoris.....	
	$\alpha^2$ Libræ .....			$\alpha$ Arietis .....	
	$\delta$ Ursæ Minoris .....	- 0.46	2	$\alpha$ Pegasi.....	- 0.48
9	$\alpha$ Pegasi.....			$\alpha$ Ursæ Minoris.....	
	$\alpha$ Ursæ Minoris.....	- 0.44	4	$\delta$ Ursæ Minoris.....	- 0.39
	$\delta$ Ursæ Minoris .....		5	$\delta$ Ursæ Minoris S.P.....	
10	$\alpha$ Cygni.....	- 0.38	6	$\alpha$ Ursæ Minoris.....	- 0.39
11	$\alpha$ Ursæ Minoris.....			$\delta$ Ursæ Minoris S.P.....	
	$\delta$ Ursæ Minoris S. P. ....		7	$\beta$ Tauri .....	- 0.31
	$\delta$ Ursæ Minoris .....	- 0.35		$\delta$ Ursæ Minoris S.P.....	
12	$\alpha$ Cygni.....	- 0.32	8	North Mark.....	- 0.34
	$\epsilon$ Pegasi.....		9	$\delta$ Ursæ Minoris.....	- 0.29 (a)
	$\alpha$ Ursæ Minoris.....	- 0.38		$\alpha$ Lyræ.....	
13	$\delta$ Ursæ Minoris .....	- 0.38	11	$\mu$ Geminorum.....	- 0.37
14	$\delta$ Ursæ Minoris S.P.....			$\delta$ Ursæ Minoris S. P. ....	
15	$\alpha$ Ursæ Minoris.....	- 0.38	12	$\alpha$ Ursæ Minoris.....	- 0.33
	$\delta$ Ursæ Minoris S. P. ....			$\delta$ Ursæ Minoris S.P.....	
	$\delta$ Ursæ Minoris .....	- 0.38		$\delta$ Ursæ Minoris .....	
16	$\delta$ Ursæ Minoris S. P. ....		13	$\alpha$ Andromedæ .....	- 0.33
	$\delta$ Ursæ Minoris .....	- 0.43		$\gamma$ Pegasi.....	
17	$\delta$ Ursæ Minoris S.P.....			$\alpha$ Ursæ Minoris.....	
	$\delta$ Ursæ Minoris .....	- 0.43	14	$\alpha$ Ursæ Minoris.....	- 0.31
18	$\delta$ Ursæ Minoris .....			$\delta$ Ursæ Minoris S. P. ....	
19	$\delta$ Ursæ Minoris S. P. ....	- 0.39		$\delta$ Ursæ Minoris .....	
20	$\beta$ Ceti.....	- 0.38	15	Sun .....	- 0.31
	$\alpha$ Ursæ Minoris.....	- 0.38		$\alpha$ Pegasi.....	
21	$\alpha$ Ursæ Minoris.....	- 0.49		$\alpha$ Ursæ Minoris.....	- 0.26
	$\delta$ Ursæ Minoris S.P.....		16	$\alpha$ Ursæ Minoris.....	- 0.37
22	$\alpha$ Ursæ Minoris.....	- 0.39		$\beta$ Orionis .....	
	$\delta$ Ursæ Minoris S. P. ....		18	$\gamma$ Pegasi .....	- 0.31
23	$\delta$ Orionis .....	- 0.41		$\alpha$ Ursæ Minoris.....	- 0.31
	$\delta$ Ursæ Minoris S.P.....			$\delta$ Ursæ Minoris.....	
24	$\alpha$ Ursæ Minoris.....	- 0.34	19	Sun .....	- 0.44
	$\alpha$ Arietis .....	- 0.39	20	North and South Marks ...	
25	North Mark.....		22	$\epsilon$ Orionis .....	- 0.52
26	$\epsilon$ Pegasi .....			$\delta$ Ursæ Minoris S. P. ....	
	$\alpha$ Ursæ Minoris.....				

(a) Instrument reversed.



Date.	OBJECTS.	$n =$	Date.	OBJECTS.	$n =$
1839, Feb. 23	$\alpha$ Ursæ Minoris.....	$^{\circ}$ - 0.47	1839, April 19	$\alpha$ Ursæ Minoris.....	$^{\circ}$ - 0.44
	$\delta$ Ursæ Minoris S. P.....		20	$\alpha$ Ursæ Minoris S. P.....	
25	$\alpha$ Ursæ Minoris.....	- 0.44	23	$\alpha$ Leonis.....	- 0.53
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Ursæ Minoris S. P.....	
26	$\alpha$ Ursæ Minoris.....	- 0.44	24	$\beta$ Geminorum.....	- 0.47
	$\alpha$ Canis Majoris.....			$\alpha$ Ursæ Minoris S. P.....	
27	$\alpha$ Ursæ Minoris.....	- 0.43	26	$\alpha$ Ursæ Minoris S. P.....	- 0.41
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Virginis.....	
March 2	$\alpha$ Ursæ Minoris.....	- 0.41	27	$\alpha$ Ursæ Minoris S. P.....	- 0.43
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Virginis.....	
4	$\alpha$ Ursæ Minoris.....	- 0.33	29	12 Canum Venat. ....	- 0.44
	$\alpha$ Arietis.....			$\alpha$ Ursæ Minoris S. P.....	
6	South Mark.....	- 0.35	30	12 Canum Venat. ....	- 0.41
9	$\alpha$ Ursæ Minoris.....	- 0.51		$\alpha$ Ursæ Minoris S. P.....	
	$\delta$ Ursæ Minoris S. P.....		May 2	$\delta$ Leonis.....	- 0.41
12	$\beta$ Tauri.....	- 0.70		$\alpha$ Ursæ Minoris S. P.....	
	$\delta$ Ursæ Minoris S. P.....		6	$\alpha$ Ursæ Minoris S. P.....	- 0.34
18	$\mu$ Geminorum.....	- 0.32 (a)		$\alpha$ Virginis.....	
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Ursæ Minoris.....	- 0.36
	$\alpha$ Leonis.....		7	$\alpha$ Ursæ Minoris S. P.....	- 0.41
	$\alpha$ Ursæ Minoris S. P.....	- 0.36	9	$\alpha$ Ursæ Minoris S. P.....	- 0.36
19	$\alpha$ Ursæ Minoris S. P.....	- 0.36		$\eta$ Bootis.....	- 0.36
	$\alpha$ Ursæ Minoris S. P.....			$\alpha$ Ursæ Minoris.....	- 0.52
21	$\delta$ Orionis.....	- 0.29	10	$\alpha$ Ursæ Minoris S. P.....	- 0.44
	$\epsilon$ Orionis.....		11	$\alpha$ Ursæ Minoris S. P.....	- 0.51
	$\delta$ Ursæ Minoris S. P.....	- 0.38		$\eta$ Bootis.....	- 0.40
22	$\alpha$ Ursæ Minoris.....	- 0.36	13	$\alpha$ Ursæ Minoris S. P.....	- 0.23 (a)
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Ursæ Minoris S. P.....	- 0.26
23	$\alpha$ Ursæ Minoris.....	- 0.37		$\alpha$ Virginis.....	- 0.28
	$\delta$ Ursæ Minoris S. P.....			$\alpha$ Virginis.....	- 0.28
25	$\alpha$ Ursæ Minoris.....	- 0.43	16	$\alpha$ Ursæ Minoris S. P.....	- 0.38
	$\alpha$ Ursæ Minoris S. P.....			$\eta$ Bootis.....	- 0.26
27	$\alpha$ Ursæ Minoris.....	- 0.39	20	$\alpha$ Ursæ Minoris S. P.....	- 0.24
	$\mu$ Geminorum.....			$\eta$ Bootis.....	- 0.21
29	$\delta$ Ursæ Minoris S. P.....	- 0.46	21	North Mark.....	- 0.28
	$\alpha$ Hydræ.....		22	$\alpha$ Ursæ Minoris S. P.....	
	$\alpha$ Ursæ Minoris S. P.....	- 0.47 (a)	23	$\alpha$ Ursæ Minoris S. P.....	- 0.29
30	$\alpha$ Ursæ Minoris.....	- 0.40	24	$\alpha$ Ursæ Minoris S. P.....	- 0.32
	$\alpha$ Ursæ Minoris S. P.....	- 0.41	25	$\alpha$ Coronæ borealis.....	- 0.34
April 7	$\alpha$ Ursæ Minoris.....	- 0.47	28	$\alpha$ Ursæ Minoris.....	- 0.25
8	$\alpha$ Ursæ Minoris S. P.....	- 0.41		$\eta$ Bootis.....	
9	$\mu$ Geminorum.....	- 0.39	29	$\alpha$ Ursæ Minoris S. P.....	
	$\delta$ Ursæ Minoris S. P.....	- 0.46		12 Canum Venat. ....	
10	$\alpha$ Ursæ Minoris.....	- 0.46	30	$\alpha$ Ursæ Minoris S. P.....	
11	$\alpha$ Ursæ Minoris S. P.....	- 0.46	31	12 Canum Venat. ....	
12	$\delta$ Ursæ Minoris S. P.....	- 0.47 (a)		$\alpha$ Ursæ Minoris S. P.....	
13	$\alpha$ Ursæ Minoris.....	- 0.40	June 1	$\delta$ Leonis.....	- 0.29
17	$\beta$ Leonis.....	- 0.41	3	$\alpha$ Ursæ Minoris S. P.....	- 0.32
	$\alpha$ Ursæ Minoris S. P.....	- 0.40		$\alpha$ Ursæ Minoris S. P.....	- 0.34
18	$\alpha$ Ursæ Minoris.....	- 0.41	4	$\alpha$ Ursæ Minoris.....	- 0.25
	$\alpha$ Ursæ Minoris S. P.....		5	$\alpha$ Ursæ Minoris S. P.....	
19	$\alpha$ Ursæ Minoris.....	- 0.41	7	12 Canum Venat. ....	
	$\alpha$ Ursæ Minoris S. P.....			$\alpha$ Ursæ Minoris S. P.....	

(a) Instrument reversed.

Date.	OBJECTS.	$n =$	Date.	OBJECTS.	$n =$
1839, June 8	12 Canum Venat. ....	- 0.27	1839, August 7	$\delta$ Ursæ Minoris .....	- 0.25
	$\alpha$ Ursæ Minoris S.P. ....			$\beta$ Lyræ .....	
11	$\beta$ Geminorum .....	- 0.26	8	$\alpha$ Ursæ Minoris S.P. ....	- 0.27
	$\alpha$ Ursæ Minoris S.P. ....			$\delta$ Ursæ Minoris .....	
13	$\alpha$ Ursæ Minoris S.P. ....	- 0.21	9	12 Canum Venat. ....	- 0.27
	$\alpha$ Bootis .....			$\alpha$ Ursæ Minoris S.P. ....	
14	12 Canum Venat. ....	- 0.23	12	$\delta$ Ursæ Minoris .....	- 0.29
	$\alpha$ Ursæ Minoris S.P. ....			$\beta$ Lyræ .....	
15	12 Canum Venat. ....	- 0.30	13	$\delta$ Ursæ Minoris .....	- 0.13
	$\alpha$ Ursæ Minoris S.P. ....			$\alpha$ Lyræ .....	
17	12 Canum Venat. ....	- 0.16	19	$\delta$ Ursæ Minoris .....	- 0.29
	$\alpha$ Ursæ Minoris S.P. ....			$\alpha$ Lyræ .....	
19	12 Canum Venat. ....	- 0.24	20	$\alpha$ Ophiuchi .....	- 0.13
	$\alpha$ Ursæ Minoris S.P. ....			$\delta$ Ursæ Minoris .....	
20	12 Canum Venat. ....	- 0.19	21	12 Canum Venat. ....	- 0.30
	$\alpha$ Ursæ Minoris S.P. ....			$\alpha$ Ursæ Minoris S.P. ....	
28	$\alpha$ Ursæ Minoris S.P. ....	- 0.28	22	$\alpha$ Ursæ Minoris S.P. ....	- 0.32
	$\alpha$ Bootis .....			$\alpha$ Lyræ .....	
29	12 Canum Venat. ....	- 0.27	24	$\delta$ Ursæ Minoris .....	- 0.21
	$\alpha$ Ursæ Minoris S.P. ....			$\beta$ Lyræ .....	
July 2	$\delta$ Ursæ Minoris .....	- 0.46	26	$\alpha$ Ursæ Minoris S.P. ....	- 0.33
	$\alpha$ Lyræ .....			$\delta$ Ursæ Minoris .....	
3	12 Canum Venat. ....	- 0.29	29	$\delta$ Ursæ Minoris .....	- 0.32
	$\alpha$ Ursæ Minoris S.P. ....			$\zeta$ Aquilæ .....	
4	12 Canum Venat. ....	- 0.28	30	$\alpha$ Ursæ Minoris S.P. ....	- 0.32
	$\alpha$ Ursæ Minoris S.P. ....			$\delta$ Ursæ Minoris .....	
	$\alpha$ Ursæ Minoris .....	- 0.27	31	$\delta$ Ursæ Minoris .....	- 0.30
5	Sun .....			$\beta$ Lyræ .....	
8	$\alpha$ Ursæ Minoris S.P. ....	- 0.31	Sept. 1	$\delta$ Ursæ Minoris S.P. ....	- 0.27
	$\delta$ Ursæ Minoris .....		2	$\delta$ Ursæ Minoris .....	
9	$\delta$ Ursæ Minoris .....	- 0.28		$\delta$ Ursæ Minoris S.P. ....	
	$\alpha$ Lyræ .....			$\alpha$ Canis Minoris .....	- 0.29
12	$\alpha$ Scorpii .....	- 0.31	3	12 Canum Venat. ....	
	$\delta$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris S.P. ....	
15	$\beta$ Libræ .....	- 0.33	4	$\alpha$ Ursæ Minoris S.P. ....	- 0.28
	$\delta$ Ursæ Minoris .....			$\delta$ Ursæ Minoris .....	
16	$\delta$ Ursæ Minoris .....	- 0.42	6	$\alpha$ Ursæ Minoris S.P. ....	- 0.30
	$\alpha$ Lyræ .....			$\alpha$ Coronæ borealis .....	
17	$\delta$ Ursæ Minoris .....	- 0.36	10	$\alpha$ Ursæ Minoris S.P. ....	- 0.34
	$\alpha$ Lyræ .....			$\delta$ Ursæ Minoris .....	
20	$\alpha$ Ursæ Minoris S.P. ....	- 0.21	11	$\delta$ Ursæ Minoris .....	- 0.35
	$\alpha$ Coronæ borealis .....			$\beta$ Lyræ .....	
22	North and South Marks ..	- 0.30	12	$\alpha$ Ursæ Minoris S.P. ....	- 0.26
24	$\alpha$ Ursæ Minoris S.P. ....	- 0.28		$\alpha$ Herculis .....	
	$\delta$ Ursæ Minoris .....		13	$\alpha$ Ursæ Minoris S.P. ....	- 0.30
25	$\alpha$ Ursæ Minoris S.P. ....	- 0.22		$\gamma$ Bootis .....	
	$\delta$ Ursæ Minoris .....		16	North Mark .....	- 0.29
26	12 Canum Venat. ....	- 0.25	17	$\delta$ Ursæ Minoris .....	- 0.34 (a)
	$\alpha$ Ursæ Minoris S.P. ....			$\zeta$ Aquilæ .....	
27	$\alpha$ Ursæ Minoris S.P. ....	- 0.29	18	$\alpha$ Ursæ Minoris S.P. ....	- 0.31
	$\delta$ Ursæ Minoris .....			$\delta$ Ursæ Minoris .....	
29	12 Canum Venat. ....	- 0.29 (a)	21	$\delta$ Ursæ Minoris .....	- 0.36
	$\alpha$ Ursæ Minoris S.P. ....			$\beta$ Lyræ .....	
30	$\alpha$ Ursæ Minoris S.P. ....	- 0.20	23	$\alpha$ Ursæ Minoris S.P. ....	- 0.32
	$\delta$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris .....	
August 2	$\delta$ Ursæ Minoris .....	- 0.30	24	$\alpha$ Ursæ Minoris S.P. ....	- 0.34
	$\alpha$ Lyræ .....			$\alpha$ Aquarii .....	
(a) Instrument reversed.					



Date.	OBJECTS.	$n =$	Date.	OBJECTS.	$n =$
1839, Sept. 25	$\alpha$ Ursæ Minoris S. P. ....	$- 0.34$	1839, Nov. 6	$\alpha$ Ursæ Minoris S. P. ....	$- 0.40$
	$\delta$ Ursæ Minoris .....		7	$\alpha$ Lyræ .....	
26	$\alpha$ Ursæ Minoris S. P. ....	$- 0.35$	9	$\alpha$ Andromedæ .....	$- 0.41$
	$\delta$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris .....	
28	$\epsilon$ Pegasi .....	$- 0.32$	10	$\delta$ Ursæ Minoris .....	$- 0.39$
	$\alpha$ Ursæ Minoris .....			$\beta$ Lyræ .....	
29	$\mu$ Geminorum .....	$- 0.33$		12 Canum Venat. ....	$- 0.35$
	$\delta$ Ursæ Minoris S. P. ....			$\alpha$ Ursæ Minoris S. P. ....	
30	$\alpha$ Ursæ Minoris S. P. ....	$- 0.30$	11	$\delta$ Ursæ Minoris .....	$- 0.37 (a)$
	$\alpha$ Lyræ .....			$\alpha$ Lyræ .....	
Oct. 2	$\alpha$ Ursæ Minoris S. P. ....	$- 0.37$		$\alpha$ Ursæ Minoris S. P. ....	$- 0.34$
	$\alpha$ Ursæ Minoris .....		12	$\alpha$ Coronæ borealis .....	$- 0.32$
3	Sun .....	$- 0.39$		12 Canum Venat. ....	
	$\alpha$ Ursæ Minoris S. P. ....			$\alpha$ Ursæ Minoris S. P. ....	$- 0.36$
4	$\alpha$ Aquarii .....	$- 0.39$	15	North Mark .....	$- 0.37$
	$\alpha$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris S. P. ....	$- 0.37$
5	$\alpha$ Ursæ Minoris S. P. ....	$- 0.45$	16	$\alpha$ Ursæ Minoris .....	$- 0.42$
	$\alpha$ Ursæ Minoris .....		17	$\alpha$ Ursæ Minoris .....	
7	$\alpha$ Ursæ Minoris S. P. ....	$- 0.44$		$\theta^1$ Ceti .....	$- 0.40$
	$\delta$ Ursæ Minoris .....		19	$\alpha$ Ursæ Minoris .....	$- 0.40$
9	$\beta$ Aquarii .....	$- 0.47$		$\theta^1$ Ceti .....	
	$\alpha$ Ursæ Minoris .....		20	$\delta$ Ursæ Minoris .....	$- 0.49$
10	$\alpha$ Ursæ Minoris S. P. ....	$- 0.41$		$\beta$ Lyræ .....	
	$\delta$ Ursæ Minoris .....			$\gamma$ Aquilæ .....	
11	$\alpha$ Ursæ Minoris S. P. ....	$- 0.33$		$\alpha$ Ursæ Minoris .....	$- 0.43$
12	Sun .....		21	$\gamma$ Ceti .....	
	$\beta$ Aquilæ .....	$- 0.40$	22	$\delta$ Ursæ Minoris .....	
	$\alpha$ Ursæ Minoris .....			$\beta$ Lyræ .....	$- 0.39$
13	$\delta$ Ursæ Minoris .....	$- 0.38$		$\alpha$ Aquilæ .....	
	$\alpha$ Lyræ .....			$\alpha$ Ursæ Minoris .....	$- 0.41$
15	$\alpha$ Andromedæ .....	$- 0.38 (a)$	23	$\gamma$ Aquilæ .....	
	$\alpha$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris .....	$- 0.33$
16	$\alpha$ Ursæ Minoris S. P. ....	$- 0.35$	25	$\theta^1$ Ceti .....	
17	$\alpha$ Ursæ Minoris .....			$\gamma$ Pegasi .....	$- 0.37$
18	$\delta$ Ursæ Minoris .....	$- 0.35$	26	$\alpha$ Ursæ Minoris .....	$- 0.39$
	$\beta$ Lyræ .....			$\delta$ Ursæ Minoris .....	
	$\alpha$ Ursæ Minoris S. P. ....	$- 0.37$	27	$\beta$ Lyræ .....	
19	$\alpha$ Ursæ Minoris .....			$\zeta$ Pegasi .....	$- 0.44$
20	$\beta$ Ceti .....	$- 0.34$	28	$\alpha$ Ursæ Minoris .....	$- 0.44$
	$\alpha$ Ursæ Minoris .....			North Mark .....	
	$\alpha$ Ursæ Minoris S. P. ....	$- 0.39$	30		
21	$\alpha$ Bootis .....				
24	$\alpha$ Ursæ Minoris S. P. ....	$- 0.37$	Dec. 7	$\delta$ Ursæ Minoris .....	
25	$\delta$ Ursæ Minoris .....			$\beta$ Lyræ .....	$- 0.47$
26	$\alpha$ Aquarii .....	$- 0.31$		$\alpha$ Cygni .....	
	$\alpha$ Ursæ Minoris .....			$\alpha$ Ursæ Minoris .....	
27	$\alpha$ Ursæ Minoris S. P. ....	$- 0.40$	12	North Mark .....	$- 0.38 (a)$
28	$\delta$ Ursæ Minoris .....		15	$\alpha$ Ursæ Minoris .....	$- 0.37$
	$\alpha$ Ursæ Minoris S. P. ....	$- 0.42$		$\eta$ Piscium .....	
29	$\alpha$ Ursæ Minoris .....		17	North Mark .....	$- 0.36$
	$\alpha$ Ursæ Minoris S. P. ....	$- 0.41$	18	North and South Marks...	$- 0.01 (b)$
30	$\delta$ Ursæ Minoris .....		20	$\beta$ Tauri .....	$+ 0.02$
31	$\delta$ Ursæ Minoris .....	$- 0.49$		$\delta$ Ursæ Minoris S. P. ....	$+ 0.03$
	$\beta$ Lyræ .....		21	$\delta$ Ursæ Minoris .....	
Nov. 5	$\gamma$ Pegasi .....	$- 0.40$		$\zeta$ Aquilæ .....	$+ 0.12$
	$\alpha$ Ursæ Minoris .....		23	$\delta$ Ursæ Minoris .....	
				$\beta$ Lyræ .....	

(a) Instrument reversed.  
(b) Instrument moved in azimuth.

## DEVIATION OF THE INSTRUMENT FROM THE POLE.

Date.	OBJECTS.	$n =$	Date.	OBJECTS.	$n =$
1839, Dec. 24	$\alpha$ Ursæ Minoris.....	+ 0.11	1839, Dec. 27	$\gamma$ Pegasi .....	+ 0.08
25	$\delta^1$ Ceti .....			$\alpha$ Ursæ Minoris .....	
	$\delta$ Ursæ Minoris .....	+ 0.08		$\alpha$ Ursæ Minoris S. P. ....	+ 0.01
26	$\zeta$ Aquilæ .....		28	$\alpha$ Ursæ Minoris .....	
	$\delta$ Ursæ Minoris .....	+ 0.09		$\alpha$ Ursæ Minoris S. P. ....	- 0.01
	$\beta$ Lyrae .....			$\alpha$ Virginis .....	
	$\zeta$ Cygni .....				
	$\alpha$ Ursæ Minoris .....				

VALUES OF THE QUANTITIES  $m$ ,  $n$ , AND  $c$ , ADOPTED IN THE REDUCTIONS.

Date.	$m$	$n$	$c$	$m$ determin- ed from	Date.	$m$	$n$	$c$	$m$ determin- ed from
1839, Jan. 1	+ 0.80	- 0.37	+ 0.10	$b$	1839, Feb. 13, 14	+ 0.67	- 0.31	+ 0.10	$b$
1, 2	+ 0.78	- 0.36	+ 0.10	$b$	14, 15	+ 0.69	- 0.31	+ 0.10	$b$
3	+ 0.79	- 0.36	+ 0.10	$a$	16	+ 0.69	- 0.26	+ 0.10	$a \& b$
4, 5	+ 0.72	- 0.37	+ 0.10	$a$	18	+ 0.83	- 0.37	+ 0.10	$b$
7	+ 0.87	- 0.38	- 0.12	$a \& b$	18, 19	+ 0.74	- 0.31	+ 0.10	$b$
7, 8	+ 0.90	- 0.40	- 0.12	$b$	20	+ 0.94	- 0.44	+ 0.10	$a \& b$
8, 9	+ 0.98	- 0.46	- 0.12	$b$	21 *	+ 0.99	- 0.48	+ 0.10	...
9, 10	+ 0.96	- 0.44	- 0.12	$b$	21, 22	+ 1.04	- 0.52	+ 0.10	$b$
11	+ 0.99	- 0.38	- 0.12	$a$	23	+ 0.95	- 0.47	+ 0.10	$b$
11, 12	+ 0.80	- 0.35	- 0.12	$b$	24 *	+ 0.92	- 0.46	+ 0.10	...
13, 14	+ 0.76	- 0.32	- 0.12	$b$	25	+ 0.90	- 0.44	+ 0.10	$b$
15	+ 0.86	- 0.38	- 0.12	$a$	26	+ 0.88	- 0.44	+ 0.10	$b$
15, 16	+ 0.87	- 0.38	- 0.12	$b$	27, 28	+ 0.87	- 0.43	+ 0.10	$b$
16, 17	+ 0.96	- 0.43	- 0.12	$b$	Mar. 1, 2	+ 0.82	- 0.41	+ 0.10	$b$
18, 19	+ 0.96	- 0.43	- 0.12	$b$	4	+ 0.69	- 0.33	+ 0.10	$b$
20	+ 0.92	- 0.39	- 0.12	$b$	5 *	+ 0.72	- 0.34	+ 0.10	...
21	+ 0.92	- 0.38	- 0.12	$b$	6	+ 0.74	- 0.35	+ 0.10	$a \& b$
22	+ 1.08	- 0.49	- 0.12	$b$	8, 9	+ 1.03	- 0.51	+ 0.10	$b$
23	+ 0.95	- 0.39	- 0.12	$b$	12, 13	+ 1.33	- 0.70	+ 0.10	$b$
24	+ 1.00	- 0.41	- 0.12	$b$	18	+ 0.82	- 0.32	- 0.14	$b$
25	+ 0.90	- 0.34	- 0.12	$a \& b$	19	+ 0.87	- 0.36	- 0.14	$b$
25, 26	+ 0.97	- 0.39	- 0.12	$b$	21	+ 0.76	- 0.29	- 0.14	$b$
27	+ 0.96	- 0.38	- 0.12	$b$	22	+ 0.88	- 0.38	- 0.14	$b$
28	+ 1.03	- 0.43	- 0.12	$b$	23	+ 0.85	- 0.36	- 0.14	$b$
29	+ 1.03	- 0.43	- 0.12	$b$	24 *	+ 0.82	- 0.34	- 0.14	...
30	+ 1.22	- 0.57	- 0.12	$b$	25, 26	+ 0.79	- 0.33	- 0.14	$b$
31	+ 1.10	- 0.49	- 0.12	$b$	27	+ 0.86	- 0.37	- 0.14	$b$
Feb. 31 }	+ 1.05	- 0.47	- 0.12	$b$	29	+ 0.75	- 0.39	- 0.14	$a$
1 }					30	+ 0.95	- 0.43	- 0.14	$b$
2	+ 1.07	- 0.48	- 0.12	$b$	April 4 *	+ 0.98	- 0.45	- 0.14	...
4, 5	+ 0.92	- 0.39	- 0.12	$b$	7, 8	+ 1.01	- 0.47	- 0.14	$b$
6	+ 0.92	- 0.39	- 0.12	$a$	9	+ 0.90	- 0.41	- 0.14	$b$
6, 7	+ 0.76	- 0.31	- 0.12	$b$	9, 10	+ 0.86	- 0.39	- 0.14	$b$
8	+ 0.79	- 0.34	- 0.12	$a \& b$	11 *	+ 0.90	- 0.42	- 0.14	...
9	+ 0.79	- 0.29	+ 0.10	$a$	11, 12	+ 0.93	- 0.46	- 0.14	$b$
11	+ 0.70	- 0.37	+ 0.10	$a \& b$	12, 13, 15	+ 0.91	- 0.46	- 0.14	$b$
12	+ 0.65	- 0.33	+ 0.10	$b$	17	+ 0.75	- 0.47	+ 0.13	$b$
12, 13	+ 0.67	- 0.33	+ 0.10	$b$	17, 18	+ 0.64	- 0.40	+ 0.13	$b$



Date.	$m$	$n$	$c$	$m$ determin- ed from.	Date.	$m$	$n$	$c$	$m$ determin- ed from.
1839,					1839,				
April 18, 19	+ 0.66	- 0.41	+ 0.13	$b$	July 10	+ 0.22	- 0.30	+ 0.14	$b$
19, 20	+ 0.70	- 0.44	+ 0.13	$b$	12	+ 0.26	- 0.31	+ 0.14	$b$
21 *	+ 0.76	- 0.48	+ 0.13	...	13 *	+ 0.27	- 0.32	+ 0.14	...
23	+ 0.83	- 0.53	+ 0.13	$b$	15	+ 0.28	- 0.33	+ 0.14	$a \& b$
24	+ 0.73	- 0.47	+ 0.13	$b$	16	+ 0.46	- 0.42	+ 0.14	$b$
26	+ 0.62	- 0.41	+ 0.13	$b$	17	+ 0.36	- 0.36	+ 0.14	$b$
27	+ 0.64	- 0.43	+ 0.13	$b$	18 *	+ 0.24	- 0.28	+ 0.14	...
29	+ 0.85	- 0.44	+ 0.13	$a \& b$	20	+ 0.13	- 0.21	+ 0.14	$b$
30	+ 0.60	- 0.41	+ 0.13	$b$	21 *	+ 0.20	- 0.26	+ 0.14	...
May 1 *	+ 0.62	- 0.41	+ 0.13	...	22	+ 0.26	- 0.30	+ 0.14	$a \& b$
2, 3	+ 0.63	- 0.41	+ 0.13	$b$	24	+ 0.19	- 0.28	+ 0.14	$b$
6	+ 0.56	- 0.34	+ 0.13	$b$	25	+ 0.08	- 0.22	+ 0.14	$b$
6, 7	+ 0.61	- 0.36	+ 0.13	$b$	26	+ 0.10	- 0.25	+ 0.14	$b$
9	+ 0.72	- 0.41	+ 0.13	$b$	27, 29	+ 0.18	- 0.29	+ 0.14	$b$
9, 10	+ 0.66	- 0.36	+ 0.13	$b$	29	+ 0.33	- 0.29	- 0.15	$b$
11	+ 0.87	- 0.52	+ 0.13	$b$	29, 30	+ 0.20	- 0.20	- 0.15	$b$
13	+ 0.69	- 0.44	+ 0.13	$b$	Aug. 1 *	+ 0.25	- 0.25	- 0.15	...
14 *	+ 0.73	- 0.48	+ 0.13	...	2	+ 0.30	- 0.30	- 0.15	$b$
16, 17	+ 0.77	- 0.51	+ 0.13	$b$	2, 3, 5 *	+ 0.27	- 0.28	- 0.15	...
20	+ 0.55	- 0.40	+ 0.13	$b$	7	+ 0.24	- 0.25	- 0.15	$b$
21	+ 0.39	- 0.23	- 0.16	$a \& b$	8	+ 0.28	- 0.27	- 0.15	$b$
22	+ 0.42	- 0.26	- 0.16	$b$	9	+ 0.29	- 0.27	- 0.15	$b$
22, 23	+ 0.45	- 0.28	- 0.16	$b$	10 *	+ 0.32	- 0.28	- 0.15	...
24	+ 0.44	- 0.28	- 0.16	$b$	12	+ 0.35	- 0.29	- 0.15	$b$
25	+ 0.58	- 0.38	- 0.16	$b$	13	+ 0.13	- 0.13	- 0.15	$b$
26, 27 *	+ 0.48	- 0.32	- 0.16	...	18 *	+ 0.29	- 0.21	- 0.15	...
27, 28	+ 0.39	- 0.26	- 0.16	$b$	19	+ 0.45	- 0.29	- 0.15	$b$
29	+ 0.38	- 0.24	- 0.16	$a \& b$	20	+ 0.19	- 0.13	- 0.15	$b$
29, 30	+ 0.34	- 0.21	- 0.16	$b$	21	+ 0.43	- 0.30	- 0.15	$b$
31	+ 0.45	- 0.28	- 0.16	$b$	22	+ 0.45	- 0.32	- 0.15	$b$
31 } June 1 }	+ 0.47	- 0.29	- 0.16	$b$	24	+ 0.26	- 0.21	- 0.15	$b$
3	+ 0.54	- 0.32	- 0.16	$b$	26	+ 0.41	- 0.33	- 0.15	$b$
4 *	+ 0.54	- 0.33	- 0.16	...	27 *	+ 0.40	- 0.32	- 0.15	...
4, 5	+ 0.53	- 0.34	- 0.16	$b$	29	+ 0.40	- 0.32	- 0.15	$b$
6 *	+ 0.45	- 0.30	- 0.16	...	30	+ 0.40	- 0.32	- 0.15	$b$
7	+ 0.37	- 0.25	- 0.16	$a \& b$	31	+ 0.38	- 0.30	- 0.15	$b$
7, 8	+ 0.37	- 0.27	- 0.16	$a \& b$	Sept. 1, 2	+ 0.36	- 0.27	- 0.15	$b$
10 *	+ 0.34	- 0.26	- 0.16	...	2, 3	+ 0.39	- 0.29	- 0.15	$b$
10, 11	+ 0.32	- 0.26	- 0.16	$a \& b$	4	+ 0.37	- 0.28	- 0.15	$b$
12 *	+ 0.26	- 0.24	- 0.16	...	5 *	+ 0.38	- 0.29	- 0.15	...
12, 13	+ 0.21	- 0.21	- 0.16	$b$	6	+ 0.40	- 0.30	- 0.15	$b$
13, 14	+ 0.23	- 0.23	- 0.16	$b$	7, 9 *	+ 0.43	- 0.32	- 0.15	...
14, 15	+ 0.33	- 0.30	- 0.16	$b$	10	+ 0.46	- 0.34	- 0.15	$b$
16 *	+ 0.24	- 0.23	- 0.16	...	11	+ 0.50	- 0.35	- 0.15	$b$
16, 17	+ 0.14	- 0.16	- 0.16	$a \& b$	12	+ 0.37	- 0.26	- 0.15	$b$
17, 18 *	+ 0.22	- 0.20	- 0.16	...	12, 13	+ 0.45	- 0.30	- 0.15	$b$
18, 19	+ 0.29	- 0.24	- 0.16	$a \& b$	16	+ 0.42	- 0.29	- 0.15	$a \& b$
20, 24	+ 0.18	- 0.19	- 0.16	$b$	17	+ 0.40	- 0.34	+ 0.11	$b$
25, 28	+ 0.26	- 0.28	+ 0.14	$b$	18	+ 0.36	- 0.31	+ 0.11	$b$
29	+ 0.25	- 0.27	+ 0.14	$b$	19, 20 *	+ 0.40	- 0.34	+ 0.11	...
July 1 *	+ 0.41	- 0.36	+ 0.14	...	20, 21	+ 0.44	- 0.36	+ 0.11	$b$
2	+ 0.57	- 0.46	+ 0.14	$b$	22 *	+ 0.42	- 0.34	+ 0.11	...
2, 3	+ 0.32	- 0.29	+ 0.14	$a \& b$	22, 23	+ 0.39	- 0.32	+ 0.11	$b$
4	+ 0.29	- 0.28	+ 0.14	$a \& b$	24	+ 0.43	- 0.34	+ 0.11	$b$
4, 5	+ 0.28	- 0.27	+ 0.14	$a \& b$	24, 25	+ 0.43	- 0.34	+ 0.11	$b$
8	+ 0.24	- 0.31	+ 0.14	$a \& b$	25, 26	+ 0.45	- 0.35	+ 0.11	$b$
9	+ 0.18	- 0.28	+ 0.14	$b$	28	+ 0.41	- 0.32	+ 0.11	$b$
					29, 30	+ 0.39	- 0.30	+ 0.11	$b$

Date.	$m$	$n$	$c$	$m$ determin- ed from	Date.	$m$	$n$	$c$	$m$ determin- ed from
1839, Oct. 1, 2	+ 0.51	- 0.37	+ 0.11	$b$	1839, Nov. 12, 13	+ 0.52	- 0.32	+ 0.09	$b$
3	+ 0.54	- 0.39	+ 0.11	$b$	15	+ 0.58	- 0.36	+ 0.09	$a \& b$
4	+ 0.55	- 0.39	+ 0.11	$b$	15, 16	+ 0.60	- 0.37	+ 0.09	$b$
4, 5	+ 0.66	- 0.45	+ 0.11	$b$	17	+ 0.67	- 0.42	+ 0.09	$b$
7	+ 0.65	- 0.44	+ 0.11	$b$	18 *	+ 0.65	- 0.41	+ 0.09	...
8 *	+ 0.64	- 0.46	+ 0.11	...	19	+ 0.63	- 0.40	+ 0.09	$a \& b$
9	+ 0.64	- 0.47	+ 0.11	$a \& b$	20	+ 0.80	- 0.49	+ 0.09	$b$
9, 10	+ 0.60	- 0.41	+ 0.11	$a \& b$	21	+ 0.69	- 0.43	+ 0.09	$a \& b$
10, 11	+ 0.46	- 0.33	+ 0.11	$b$	22	+ 0.68	- 0.39	+ 0.09	$a \& b$
12	+ 0.56	- 0.40	+ 0.11	$b$	23	+ 0.72	- 0.41	+ 0.09	$b$
13	+ 0.54	- 0.38	+ 0.11	$a \& b$	25	+ 0.66	- 0.33	+ 0.09	$a \& b$
15	+ 0.60	- 0.38	- 0.12	$a \& b$	26	+ 0.70	- 0.37	+ 0.09	$b$
16, 17	+ 0.62	- 0.35	- 0.12	$a \& b$	27	+ 0.74	- 0.39	+ 0.09	$b$
17, 18	+ 0.61	- 0.35	- 0.12	$b$	28	+ 0.83	- 0.44	+ 0.09	$b$
18, 19	+ 0.65	- 0.37	- 0.12	$b$	30	+ 0.86	- 0.44	+ 0.09	$a \& b$
20	+ 0.69	- 0.34	- 0.12	$a \& b$	Dec. 2, 5, 6 *	+ 0.90	- 0.46	+ 0.09	...
20, 21	+ 0.70	- 0.39	- 0.12	$b$	7	+ 0.95	- 0.47	+ 0.09	$b$
24, 25	+ 0.66	- 0.37	- 0.12	$a \& b$	13	+ 0.90	- 0.38	- 0.12	$a \& b$
26	+ 0.64	- 0.31	- 0.12	$b$	14, 15	+ 0.83	- 0.37	- 0.12	$b$
27, 28	+ 0.77	- 0.40	- 0.12	$a \& b$	16	+ 0.79	- 0.36	- 0.12	$a \& b$
28, 29	+ 0.79	- 0.42	- 0.12	$a \& b$	17, 18	+ 0.26	- 0.01	- 0.12	$a \& b (a)$
29, 30	+ 0.79	- 0.41	- 0.12	$a \& b$	19 *	+ 0.22	0.00	- 0.12	...
31 } Nov. 1 }	+ 0.84	- 0.49	- 0.12	$a \& b$	20	+ 0.19	+ 0.02	- 0.12	$b$
5	+ 0.74	- 0.40	- 0.12	$a \& b$	21	+ 0.12	+ 0.03	- 0.12	$a \& b$
6, 7	+ 0.75	- 0.40	- 0.12	$a \& b$	22, 23	+ 0.01	+ 0.12	- 0.12	$b$
9	+ 0.74	- 0.41	- 0.12	$b$	24	+ 0.06	+ 0.11	- 0.12	$a \& b$
10	+ 0.70	- 0.39	- 0.12	$a \& b$	25	+ 0.06	+ 0.08	- 0.12	$a \& b$
10, 11	+ 0.65	- 0.35	- 0.12	$b$	26	+ 0.09	+ 0.09	- 0.12	$b$
11	+ 0.58	- 0.37	+ 0.09	$b$	26, 27	+ 0.12	+ 0.08	- 0.12	$b$
11, 12	+ 0.61	- 0.34	+ 0.09	$a \& b$	27, 28	+ 0.30	+ 0.01	- 0.12	$a \& b$
					28, 29, 31	+ 0.27	- 0.01	- 0.12	$b$

(a) Instrument moved in azimuth.

## MEAN CORRECTION AND DAILY RATE OF THE CLOCK, ADOPTED IN THE REDUCTIONS.

Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.	Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.
1839, Jan. 1	h. m. 3 17	+ 54.82	+ 1.46	.....	6	1839, Jan. 17	h. m. 23 17	+ 18.75	+ 1.74	.....	5
2	20 46	55.88	1.50	.....	5	19	21 35	22.10	1.59	.....	7
3	2 50	57.76	1.36	.....	2	20	0 3	23.85	1.66	.....	4
4	20 35	58.77	1.26	.....	1	21	21 38	25.34	1.78	.....	5
5	0 50	60.26	1.38	.....	3	22	4 42	27.64	1.62	.....	5
7	3 45	63.18	1.32	.....	5	23	3 21	29.17	1.86	.....	5
8	21 22	64.15	1.75	.....	5	24	3 47	31.06	1.57	.....	5
9	20 34	65.84	1.92	.....	6	25	21 23	32.21	1.81	.....	3
10	3 17	68.30	1.74	.....	5	26	0 11	34.23	2.12	.....	7
11	4 14	70.11	1.48	.....	5	27	6 59	36.95	1.91	.....	5
12	21 5	71.15	1.42	.....	3	28	5 7	38.71	1.83	.....	5
14	1 3	74.22	1.32	.....	7	29	4 33	40.50	1.82	.....	5
15	22 17 (a)	15.39	1.50	.....	6	30	7 7	42.51	2.22	.....	6
16	21 45	16.86	1.78	.....	5	31	3 47	44.42	2.22	.....	5

(a) Clock put forward one minute.



Date.	Time by Clock.	Correction.	Daily Rate, or r.	r'	No. of Stars.	Date.	Time by Clock.	Correction.	Daily Rate, or r.	r'	No. of Stars.
1839, Feb. 1	h. m. 0 36	s. +46.35	s. + 2.17	.....	4	1839, Apr. 21	h. m. 9 39	s. + 6.02	s. .....	.....	3
2	1 58	48.64	2.16	.....	4	23	5 59 (d)	+ 0.62	+ 0.93	.....	5
4	6 6	53.34	2.02	.....	6	24	4 46	1.50	.....	.....	2
5	4 33	55.23	2.10	.....	5		7 30 (d)	1.52	- 0.10	.....	3
6	6 40	57.51	2.19	.....	3	26	11 47	1.29	+ 0.21	.....	5
	20 54	58.81	1.92	.....	5	27	12 2	1.50	0.02	.....	4
8	1 57	61.13	1.65	.....	1	29	12 26	1.55	0.34	.....	4
9	18 36	63.93	1.88	.....	2	30	13 50	1.91	0.19	.....	4
11	5 29	66.67	2.02	.....	5						
12	2 37	68.45	1.87	.....	5	May 1	11 24	2.08	0.41	.....	2
13	0 1	70.12	1.58	.....	2	2	9 44	2.46	0.12	.....	5
14	0 43	71.75	1.75	.....	7	3	9 37	2.58	0.13	.....	1
15	22 56	73.37	1.42	.....	1	6	12 12	2.99	0.37	.....	5
16	5 54 (a)	15.21	1.86	.....	5	7	6 20	3.27	0.25	.....	5
18	0 43	18.52	2.02	.....	5	9	11 33	3.83	0.43	.....	5
20	5 45	22.98	2.36	.....	4	10	6 27	4.17	0.02	.....	5
21	8 6	25.57	2.13	.....	2	11	12 22	4.20	0.38	.....	5
22	3 49	27.32	2.30	.....	6	13	12 2	4.95	+ 0.07	.....	5
23	3 9	29.56	1.99	.....	6	14	11 43	5.02	- 0.19	.....	5
24	7 39	31.92	2.22	.....	5	16	13 16	4.63	+ 0.23	.....	5
25	3 31	33.76	2.16	.....	5	20	11 53	5.53	0.91	.....	5
26	7 15	36.25	2.12	.....	5	21	14 45	6.55	0.10	.....	4
27	3 54	38.07	1.99	.....	6	22	14 6	6.65	0.13	.....	5
28	10 59	40.65	2.53	.....	4	23	12 48	6.77	0.14	.....	5
						24	12 48	6.91	0.10	.....	5
Mar. 1	4 26	42.49	.....	.....	1	25	10 54	7.00	0.22	.....	7
	12 11	42.57	2.32	.....	6	27	9 42	7.43	0.12	.....	6
2	4 27	44.14	2.05	.....	6	28	10 20	7.55	0.08	.....	5
4	0 58	47.94	1.88	.....	2	29	9 1	7.63	0.32	.....	5
5	8 5	50.38	2.21	.....	5	30	8 49	7.95	0.11	.....	5
6	5 42	52.37	2.07	.....	5	31	11 52	8.07	0.37	.....	5
8	7 26	56.66	2.41	.....	2						
9	5 58	58.92	2.13	.....	5	June 1	7 24	8.37	0.21	.....	5
12	7 1 (a)	5.41	2.16	.....	5	3	8 17	8.79	0.08	.....	5
18	8 33	18.50	1.84	.....	5	4	4 11	8.94	0.31	.....	10
19	6 24	20.18	2.02	.....	2	6	14 8	9.38	0.13	.....	1
21	5 15	24.12	1.83	.....	5	7	12 57	9.50	0.09	.....	4
22	5 21	25.96	1.84	.....	6	8	10 8	9.58	+ 0.38	.....	5
23	5 23	27.80	1.64	.....	5	10	15 14	10.41	- 0.13	.....	3
24	8 24	29.64	1.81	.....	2	11	6 20	10.33	+ 0.54	.....	2
25	5 51	31.26	1.85	.....	5	12	15 0	11.07	0.57	.....	5
27	8 28	35.16	1.83	.....	4	13	11 43	11.56	0.42	.....	5
29	7 51	38.77	1.62	.....	5	14	11 10	11.97	0.35	.....	5
30	8 36	40.44	2.04	.....	6	15	12 4	12.33	0.53	.....	5
						16	10 14	12.82	0.46	.....	3
April 4	8 32	50.62	2.04	.....	3	17	8 36	13.25	0.18	.....	7
8	2 15	58.36	2.34	.....	9	19	11 20	13.62	0.01	.....	5
9	7 0	61.17	2.49	.....	5	20	14 16	13.63	0.12	.....	5
10	4 34	63.41	2.17	.....	5	24	7 35	14.06	0.34	.....	1
11	6 49 (a)	5.78	2.26	.....	5	28	15 3	15.50	0.55	.....	2
12	4 56	+ 7.86	.....	.....	3	29	12 35	15.99	0.36	.....	5
13	9 3 (b)	- 0.50	- 3.64	.....	5						
15	7 30	- 7.54	.....	.....	3	July 1	16 34	16.77	0.13	.....	4
17	8 58 (c)	- 4.50	+ 2.88	.....	6	2	17 47	16.91	1.07	.....	3
18	6 42	- 1.89	2.66	.....	6	3	10 49	17.65	0.36	.....	7
19	8 32	+ 0.95	.....	.....	5	4	13 14	18.04	0.07	.....	5
20	7 33 (d)	+ 3.55	+ 2.27	.....	5	8	14 29	18.33	0.04	.....	6

(a) Clock put forward one minute.

(b) Transit Clock taken away to be cleaned.

Observations made with Circle Clock.

(c) Transit Clock replaced.

(d) Pendulum adjusted to alter rate.

## MEAN CORRECTION AND DAILY RATE OF THE CLOCK.

Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.	Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.
1839, July 9	<i>h. m.</i> 18 8	<i>s.</i> +18.84†	<i>s.</i> + 0.24	<i>s.</i> .....	4	1839, Sept. 21	<i>h. m.</i> 17 34	<i>s.</i> +37.76	<i>s.</i> + 0.37	<i>s.</i> + 0.12	5
10	11 23	19.01†	0.14	.....	2	22	23 38	38.03	0.25	+ 0.03	4
12	14 42	19.32†	0.32	.....	3	23	17 34	38.23	0.26	- 0.01	5
13	12 48	19.62†	0.21	.....	2	24	23 20	38.53	0.68	+ 0.35	3
15	13 14	20.04†	0.15	.....	5	25	16 34	39.20	0.79	- 0.20	5
16	18 14	20.22†	0.07	.....	3	26	17 34	39.81	0.40	- 0.18	5
17	19 8	19.87	0.20	.....	6	28	20 16	39.86	+ 0.15	+ 0.06	5
18	18 49	20.07	0.33	.....	5	29	7 5	40.21	- 0.20	+ 0.31	6
20	15 53	20.69	.....	.....	5	30	19 34	40.02	- 0.18	+ 0.36	5
21	16 8 (a)	+20.86	- 0.10	.....	2	Oct. 2	17 22	40.98	+ 0.56	+ 0.03	5
22	14 8	20.77	+ 0.01	.....	1	4	19 54	42.31	0.60	- 0.01	5
24	15 38	20.79	- 0.28	.....	5	5	17 0	42.83	0.66	+ 0.08	5
25	18 44	20.47	+ 0.66	.....	2	7	19 57	44.56	0.72	- 0.05	5
26	12 48	20.97	0.01	.....	1	8	21 33	45.27	0.80	+ 0.12	5
27	15 35	20.98	0.10	.....	5	9	19 53	46.12	0.80	- 0.13	5
29	15 47	21.18	0.26	.....	3	10	20 27	46.80	0.71	+ 0.04	5
30	12 41	21.41	+ 0.23	.....	6	12	19 28	48.37	0.71	- 0.04	5
Aug. 1	19 24	21.94	- 0.10	.....	4	13	17 57	49.00	0.71	+ 0.04	4
2	18 52	21.84	+ 0.60	.....	4	15	22 59	50.76	0.75	- 0.03	5
3	3 38	22.06	0.34	.....	1	17	19 17	52.00	0.76	+ 0.04	5
4	4 45	22.41	+ 0.35	.....	2	18	17 36	52.73	0.90	+ 0.12	5
5	16 45	22.94	- 0.10	.....	5	19	15 32	53.65	0.98	- 0.03	5
7	16 47	22.75	+ 0.17	.....	5	20	23 45	54.90	0.73	- 0.15	4
8	14 52	22.91	0.36	.....	5	21	17 7	55.35	0.67	+ 0.07	3
9	16 38	23.30	0.38	.....	5	25	17 40	59.15	1.20	+ 0.06	2
12	18 55	24.48	0.75	.....	5	26	21 22	60.61	1.11	- 0.13	3
13	19 17	25.23	0.47	.....	5	28	17 52 (b)	2.21	0.85	- 0.01	3
18	18 7	27.55	0.36	.....	3	29	19 38	3.11	0.84	0.00	6
19	19 15	27.93	0.79	.....	5	30	18 44	3.92	0.92	+ 0.08	1
20	18 50	28.71	0.32	.....	6	31	18 44	5.19†	.....	.....	1
21	17 24	29.01	0.50	.....	5		23 33	5.14	0.67	- 0.29	3
22	18 31	29.53	0.56	.....	1	Nov. 1	18 44	5.49	0.50	+ 0.08	1
24	18 48	30.66	0.28	.....	5	5	22 26	8.93	0.61	- 0.05	5
26	16 19	31.18	0.42	.....	5	7	19 48	9.88	0.55	+ 0.02	2
27	17 5	31.61	0.54	.....	5	9	0 0	11.18	0.40	- 0.09	1
29	19 6	32.73	0.48	.....	5	10	18 51	11.44	0.29	- 0.06	2
30	15 50	33.14	0.43	.....	3	11	20 17	11.68	0.26	+ 0.04	6
31	19 16	33.63	+ 0.25	- 0.15	5	12	17 23	11.94	0.39	+ 0.11	3
Sept. 1	5 15	33.68	- 0.36	- 0.28	5	13	21 33	12.54	0.54	+ 0.03	6
2	18 19	33.40	0.73	- 0.39	5	16	18 25	14.33	0.44	- 0.06	6
3	14 56	32.49	1.24	- 0.21	7	17	0 29	14.78	0.65	+ 0.23	4
4	17 13	30.87	- 0.93	+ 0.50	5	18	0 2	15.64	0.67	- 0.21	2
5	19 16	30.45	+ 0.08	+ 0.43	5	19	0 17	16.11	0.57	+ 0.10	5
6	15 27	30.82	0.40	- 0.05	1	20	18 23	16.60	0.59	- 0.07	5
7	17 54	31.20	0.43	+ 0.08	5	21	1 59	17.26	0.66	+ 0.12	6
9	21 32	32.47	0.68	+ 0.04	4	22	18 54	17.79	0.68	- 0.10	5
10	18 14	33.09	0.72	- 0.01	5	23	18 20	18.36	0.55	- 0.04	5
11	19 16	33.83	0.69	- 0.02	5	25	1 45	19.42	0.48	+ 0.01	5
12	20 52	34.54	0.48	- 0.18	3	26	0 20	19.87	0.48	0.00	6
13	17 14	34.82	0.34	+ 0.02	6	27	18 54	20.24	0.29	- 0.24	5
16	19 36	36.02	0.17	- 0.07	5	28	21 43	20.26	0.18	+ 0.15	5
17	17 53	36.12	0.35	+ 0.26	5	30	0 54	21.77†	0.55	+ 0.02	3
18	17 45	36.72	0.43	- 0.17	5	Dec. 2	20 36	22.83†	0.56	- 0.01	1
19	19 28	36.99	0.29	+ 0.04	5	5	18 44	24.33†	0.47	- 0.01	2
20	19 54	37.33	0.41	+ 0.08	5						

(a) Pendulum adjusted to alter rate.

(b) Clock put forward one minute.



Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.	Date.	Time by Clock.	Correction.	Daily Rate, or $r$ .	$r'$	No. of Stars.
1839, Dec. 6	$h. m.$ 19 29	$s.$ + 24.38	$s.$ + 0.49	$s.$ + 0.04	5	1839, Dec. 23	$h. m.$ 19 50	$s.$ + 32.74	$s.$ + 0.36	$s.$ - 0.05	6
7	19 6	24.90	0.53	0.00	5	24	0 33	33.10	0.23	- 0.06	5
13	22 56	28.05	0.36	- 0.02	1	25	19 44	33.25	0.28	+ 0.11	5
14	18 31	28.33	0.41	+ 0.08	1	26	19 57	33.64	0.47	+ 0.08	5
16	3 24	29.78	0.60	0.00	5	27	23 1	34.28	0.31	- 0.23	5
17	0 0	30.29	0.50	- 0.11	1	28	19 57	34.38	0.47	+ 0.41	5
18	5 15	30.75	0.40	+ 0.02	5		14 10	34.97	0.76	- 0.03	4
20	4 58	31.60	0.41	- 0.01	4	29	13 57	35.70	0.62	- 0.12	2
21	0 6	31.92	0.42	+ 0.02	6	31	3 28	36.36	.....	.....	5

MEAN RIGHT ASCENSIONS OF THE STARS OBSERVED IN THE YEAR 1839, REDUCED TO  
JANUARY 1, 1839.

$\alpha$ Andromedæ.				$\gamma$ Pegasi.				$\lambda$ Cassiopeæ.				65 Piscium preceding.				36 Andromedæ.			
Jan. 19	$h. m. s.$ 0 0	4.77		Feb. 14	$h. m. s.$ 0 4	57.00		Jan. 2	$h. m. s.$ 0 22	55.55		Jan. 16	$h. m. s.$ 0 41	14.81		Jan. 17	$h. m. s.$ 0 46	21.44	
20		4.67		18		57.14						17		14.94		19		21.35	
Feb. 12		4.57		23		57.07		55 Piscium.				19		15.00		$\gamma$ Cassiopeæ.			
13		4.63		27		57.06						65 Piscium following.				Jan. 24	$h. m. s.$ 0 47	2.62	
14		4.62		June 4		57.04		Jan. - 2	$h. m. s.$ 0 31	27.71		Jan. 16	$h. m. s.$ 0 41	15.34		26		2.67	
18		4.81		Sept. 22		57.09		$\beta$ Ceti.				17		15.32		67 Piscium.			
23		4.74		24		57.13		Jan. 14	$h. m. s.$ 0 35	30.08		19		15.37		Jan. 15	$h. m. s.$ 0 47	19.52	
27		4.44		Oct. 29		56.99		15		29.92		$\varphi^2$ Ceti.				16		19.47	
Mar. 2		4.51		31		56.95		17		30.23		Jan. 7	$h. m. s.$ 0 42	3.53		A. S. C. 91 S. P.			
4		4.68		Nov. 5		57.36		20		30.35		12		3.31		Mar. 18	$h. m. s.$ 0 47	56.39	
19		4.78		11		57.28		Oct. 20		30.52		14		3.47		21		56.49	
June 4		4.72		17		57.07		Nov. 17		30.40		Groombridge 144 S. P.				25		56.23	
Sept. 22		4.65		18		57.11		19		30.17		Mar. 21	$h. m. s.$ 0 42	29.33		27		56.61	
24		4.52		19		57.13		$\eta$ Cassiopeæ.				25		29.99		April 8		55.63	
Oct. 15		4.66		26		57.12		Jan. 2	$h. m. s.$ 0 39	24.17		April 8		28.08		$\varphi^3$ Ceti.			
20		4.66		Dec. 24		57.11		$\delta$ Piscium.				17		29.58		Jan. 2	$h. m. s.$ 0 47	57.07	
29		4.59		27		57.14		Jan. 20	$h. m. s.$ 0 40	20.04		18		26.28		3		56.96	
31		4.69		41 Piscium.				Aug. 26		20.05		66 Piscium.				7		56.71	
Nov. 5		4.74						Oct. 20		20.00		Jan. 2	$h. m. s.$ 0 46	4.40		Groombridge 195 S. P.			
11		4.85						$\zeta$ Cassiopeæ.				7		4.26		May 16	$h. m. s.$ 0 50	41.83	
13		4.89						$\delta$ Piscium.				9		3.97		22		44.10	
17		4.59		Sept. 22	$h. m. s.$ 0 12	19.06		$\epsilon$ Piscium.				66 Piscium.				23		44.45	
18		4.66		Nov. 16		19.19		Jan. 20	$h. m. s.$ 0 40	20.04		Jan. 2	$h. m. s.$ 0 46	4.40		24		43.31	
19		4.75		17		18.97		Aug. 26		20.05		7		4.26		25		43.65	
25		4.76		10 Ceti.				Oct. 20		20.00		9		3.97		$\varphi^3$ Ceti.			
26		4.67						$\delta$ Piscium.				66 Piscium.				Jan. 2	$h. m. s.$ 0 47	57.07	
Dec. 24		4.56		Oct. 19	$h. m. s.$ 0 18	21.94		64 Piscium.				3				3		56.96	
27		4.61		12 Ceti.				Jan. 7	$h. m. s.$ 0 40	31.44		36 Andromedæ.				7		56.71	
$\gamma$ Pegasi.								12		31.16		Jan. 12	$h. m. s.$ 0 46	21.43		Groombridge 195 S. P.			
Jan. 20	$h. m. s.$ 0 4	57.05						$\delta$ Piscium.				14		21.56		May 16	$h. m. s.$ 0 50	41.83	
Feb. 12		57.00		Oct. 19	$h. m. s.$ 0 21	49.17		Jan. 7	$h. m. s.$ 0 40	31.44		Jan. 12	$h. m. s.$ 0 46	21.43		22		44.10	
13		57.16						12		31.16		14		21.56		23		44.45	

ε Piscium.			α Ursæ Minoris.			α Ursæ Minoris S.P.			τ Piscium.			A. S. C. 179.		
Jan. 20	<i>h. m. s.</i>	0 54 35.42	Jan. 1	<i>h. m. s.</i>	1 1 54.62	Jan. 7	<i>h. m. s.</i>	1 1 55.00	Jan. 7	<i>h. m. s.</i>	1 2 48.57	Jan. 11	<i>h. m. s.</i>	1 29 34.96
21		35.58	2		54.41	Mar. 18		55.11	9		48.50	12		34.84
Sept. 23		35.53	7		54.86	19		55.03	12		48.47	16		34.72
Nov. 17		35.45	9		54.04	21		54.90	ζ Piscium.			ο Piscium.		
25 Ceti.			11		55.41	25		55.27	Jan. 1 1 2 48.62			Jan. 21 1 36 53.88		
			12		54.34	27		55.57	2 48.64			22 54.26		
			14		55.07	29		54.26	δ Cassiopeæ.			Feb. 18 53.98		
			15		54.41	30		53.16	Jan. 9 1 15 20.37			Jan. 24 1 42 53.06		
			16		53.94	April 8		51.48	11 20.59			31 53.19		
			17		53.56	10		56.94	44 Ceti.			Feb. 1 53.19		
			19		53.28	13		55.87	Jan. 2 1 15 56.78			ζ Ceti.		
			21		54.87	18		54.96	δ <sup>1</sup> Ceti.			Jan. 1 1 43 30.90		
			22		56.11	19		54.45	Jan. 1 1 15 58.58			11 30.96		
			28		55.16	20		53.55	3 58.47			12 30.65		
			Feb. 1		54.42	May 7		54.34	17 58.34			α Trianguli.		
			6		53.68	10		51.53	31 58.64			Jan. 9 1 43 55.10		
			12		53.86	June 5		54.19	Nov. 17 58.60			17 55.01		
			13		54.15	July 8		57.78	19 58.53			19 55.22		
			14		53.92	24		57.89	Dec. 24 58.70			γ Arietis.		
			15		54.70	25		54.69	46 Ceti.			Jan. 21 1 44 42.40		
			23		53.06	27		56.39	Jan. 14 1 17 42.06			β Arietis.		
			25		53.78	30		52.88	15 42.08			Nov. 19 1 45 45.70		
			27		53.44	Aug. 8		53.50	16 41.84			7 Arietis.		
			Mar. 2		52.61	26		55.27	47 Ceti.			Jan. 1 1 46 53.12		
			9		52.43	30		54.59	Jan. 17 1 18 54.64			9 53.09		
			19		55.10	Sept. 3		53.71	31 54.96			A. S. C. 226.		
			22		54.62	4		54.60	η Piscium.			Jan. 9 1 57 35.86		
			23		55.38	10		54.60	Sept. 23 1 22 52.64			17 35.69		
			25		55.01	16		54.56	Dec. 15 52.62			19 35.90		
			27		55.31	18		54.92	50 Ceti.			α Arietis.		
			30		52.97	23		53.96	Jan. 9 1 28 7.79			Jan. 1 1 58 6.61		
			April 7		51.32	25		54.60	11 7.90			11 6.74		
			9		57.16	26		54.70	12 7.71					
			11		55.67	30		54.88						
			12		54.67	Oct. 2		55.15						
			17		55.12	5		55.25						
			18		54.76	7		54.86						
			19		53.65	10		54.25						
			May 6		54.36	16		54.81						
			9		51.79	18		54.68						
			June 4		54.37	24		54.58						
			Sept. 23		55.01	27		55.13						
			Oct. 2		55.05	28		55.36						
			5		55.19	29		54.90						
			17		54.89	Nov. 15		55.57						
			19		54.80	Dec. 27		54.37						
			29		55.09	32 Ceti.								
			Nov. 16		55.31	Jan. 4	<i>h. m. s.</i>	1 2 7.51						
			20		56.62	16		7.45						
			22		54.48	17		7.34						
			Dec. 7		55.15									
			26		54.37									
			28		54.27									



$\alpha$ Arietis.			69 Ceti.			$\gamma$ Ceti.			$\alpha$ Ceti.			$\pi^2$ Ceti.		
Jan. 24	h. m. s.	6.74	Feb. 5	h. m. s.	42.06	Nov. 21	h. m. s.	57.84	Feb. 12	h. m. s.	52.26	Jan. 1	h. m. s.	41.90
29		6.67				25		57.89	Nov. 13		52.17	2		41.94
31		6.55				26		57.80	21		52.09	7		41.79
Feb. 1		6.70	70 Ceti.			Dec. 31		57.87	25		52.05	Groombridge 642.		
5		6.85							26		52.17			
18		6.65	Jan. 31	2 14	0.48	39 Arietis.			Dec. 31		52.16	Jan. 2	3 14	36.78
23		6.52										7		35.98
25		6.54	71 Ceti.			Jan. 2	2 38	20.38	$\rho^2$ Eridani.			12		35.41
27		6.64							Jan. 12	2 54	46.32	Groombridge 642 S. P.		
Mar. 2		6.54	Jan. 7	2 16	50.40	A. S. C. 299.			14		48.29			
4		6.66	31		50.38				15		48.35			
9		6.50	Feb. 5		50.55	Jan. 7	2 39	0.02	$\epsilon$ Persei.			May 13	3 14	34.99
22		6.72				28		0.08	Jan. 28	2 54	53.00	14		36.15
25		6.82	$\sigma$ Ceti.			$\tau$ Persei.						16		35.27
April 8		6.62				Jan. 2	2 42	53.19	$\rho^3$ Eridani.			22		39.39
10		6.70	Jan. 28	2 24	27.52	A. S. C. 315.			Jan. 1	2 56	22.30	24		38.74
12		6.51	31		27.39	Dec. 24	2 47	37.60	2		22.46	A. S. C. 371.		
Nov. 13		6.73	Feb. 5		27.61	$\epsilon$ Arietis.			11		22.44	Jan. 1	3 16	5.21
25		6.58	77 Ceti.			Nov. 19	2 50	1.07	$\delta$ Arietis.			10		4.71
26		6.75				$\lambda$ Ceti.			Feb. 19	3 2	25.82	14		5.24
30		6.61	Jan. 28	2 26	46.22	Dec. 24	2 51	5.66	Nov. 19		26.03	A. S. C. 373.		
Dec. 24		6.71	$\nu$ Arietis.			5 Eridani.			$\zeta$ Eridani.			Jan. 11	3 17	6.63
$\beta$ Trianguli.						Jan. 28	2 51	33.80	Jan. 1	3 8	0.96	15		6.63
Jan. 1	1 59	58.95	Feb. 18	2 29	41.16	$\gamma$ Persei.			95 Ceti.			$\sigma$ Persei.		
9		59.04	33 Arietis.			Jan. 2	2 31	17.39	Jan. 1	3 10	8.46	Jan. 1	3 19	15.31
11		59.09				28		17.42	2		8.47	14		15.19
$\gamma$ Trianguli.			Jan. 2	2 31	17.39	Dec. 8		17.59	7		8.42	16		15.03
Jan. 1	2 3	2.84	Feb. 8			$\epsilon$ Ceti.			17 Eridani.			$\downarrow$ Persei.		
63 Ceti.						Jan. 31	2 31	46.75	Jan. 1	3 22	37.99	Jan. 1	3 25	4.65
Jan. 17	2 3	25.34	Feb. 5		46.74	Feb. 5		46.74	2		38.03	10		4.28
Feb. 1		25.56	84 Ceti.			$\rho^1$ Eridani.			7			11		4.67
$\theta^1$ Arietis.						Jan. 14	2 53	15.29	A. S. C. 359.			$\epsilon$ Eridani.		
Nov. 19	2 9	11.17	Jan. 28	2 32	59.37	28		15.25	Jan. 10	3 10	36.57	Jan. 2	3 25	20.99
9 Persei.			35 Arietis.			Feb. 5		15.14	11		36.77	7		20.86
Feb. 1	2 11	10.70	Jan. 2	2 34	1.17	$\alpha$ Ceti.			14		36.80			
5		11.19	$\gamma$ Ceti.			Jan. 1	2 53	52.20	$\pi^1$ Ceti.					
$\phi$ Ceti.			Jan. 7	2 34	57.84	7		52.10	Jan. 15	3 10	55.35			
Jan. 17	2 11	12.89	Feb. 18		57.75	$\alpha$ Ceti.			16		55.22			
31		12.92												

10 Tauri.			29 Tauri.			$\zeta$ Persei.			35 Eridani.			A. S. C. 467.		
Jan. 10	<i>h. m. s.</i>	3 28 39.55	Jan. 8	<i>h. m. s.</i>	3 37 7.31	Jan. 17	<i>h. m. s.</i>	3 44 1.22	Jan. 7	<i>h. m. s.</i>	3 53 22.78	Feb. 23	<i>h. m. s.</i>	4 6 9.50
11		39.74	19		7.42	19		1.45	11		22.81	25		9.61
			21		7.47				17		22.55	27		9.74
20 Eridani.			* Pleiadum D + 23° 14'.			30 Eridani.			$\nu$ Tauri.			39 Eridani.		
Jan. 1	<i>h. m. s.</i>	3 28 57.50	Jan. 1	<i>h. m. s.</i>	3 37 45.67	Jan. 21	<i>h. m. s.</i>	3 44 44.60	Jan. 1	<i>h. m. s.</i>	3 54 35.97	Jan. 8	<i>h. m. s.</i>	4 6 44.08
7		57.50	2		45.68	22		44.74	2		35.79	11		44.28
			7		45.58							14		44.27
21 Eridani.			$\eta$ Tauri.			32 Eridani.			37 Tauri.			$\mu$ Tauri.		
Jan. 1	<i>h. m. s.</i>	3 31 4.44	Jan. 14	<i>h. m. s.</i>	3 37 55.48	Jan. 1	<i>h. m. s.</i>	3 46 12.65	Jan. 24	<i>h. m. s.</i>	3 55 11.11	Jan. 22	<i>h. m. s.</i>	4 6 47.89
2		4.52	22		55.47	2		12.60	Aug. 2		11.20	Feb. 1		47.76
7		4.48	24		55.49	7		12.59	Nov. 21		11.04	22		47.65
12 Tauri.			Mar. 22		55.65	$\epsilon$ Persei.			37 Eridani.			40 Eridani.		
			23		55.57	Jan. 8	<i>h. m. s.</i>	3 47 4.01	Jan. 7	<i>h. m. s.</i>	4 2 31.46	Jan. 21	<i>h. m. s.</i>	4 7 51.63
Jan. 16	<i>h. m. s.</i>	3 31 28.05	April 10		55.49	19		4.05	8		31.35	28		51.91
21		28.18	Nov. 21		55.32	24		4.06	11		31.47	Feb. 18		51.86
Feb. 12		28.45	30		55.58	Groombridge 750.			45 Tauri.			66 Tauri.		
			Dec. 31		55.52	Jan. 15	<i>h. m. s.</i>	3 48 2.75	Jan. 21	<i>h. m. s.</i>	4 2 46.27	Jan. 7	<i>h. m. s.</i>	4 15 5.51
$\delta$ Persei.			$\pi$ Eridani.			16		2.61	28		46.33	8		5.39
Jan. 15	<i>h. m. s.</i>	3 31 29.27	Jan. 16	<i>h. m. s.</i>	3 38 31.87	Groombridge 750 S. P.			$\mu$ Persei.			10		5.31
Feb. 22		29.23	19		32.21	May 13	<i>h. m. s.</i>	3 48 2.26	Feb. 25	<i>h. m. s.</i>	4 3 5.88	$\xi$ Eridani.		
23		29.35	Feb. 12		32.19	14		2.76	27		5.94	Jan. 21	<i>h. m. s.</i>	4 15 39.95
22 Eridani.			A. S. C. 416.			16		2.03	$\circ$ Eridani.			22		40.06
Jan. 7	<i>h. m. s.</i>	3 32 40.35	Feb. 22	<i>h. m. s.</i>	3 38 49.40	22		5.47	Feb. 18	<i>h. m. s.</i>	4 4 0.70	$\nu^1$ Tauri.		
8		40.21	23		49.48	24		5.10	22		0.49	Nov. 21	<i>h. m. s.</i>	4 16 40.89
14		40.23	25		49.45	$\zeta$ Persei.			23		0.41	44 Eridani.		
A. S. C. 400.			26 Tauri (Pleiadum).			Jan. 21	<i>h. m. s.</i>	3 48 31.95	46 Tauri.			Jan. 7	<i>h. m. s.</i>	4 20 13.05
Jan. 1	<i>h. m. s.</i>	3 34 14.28	Jan. 1	<i>h. m. s.</i>	3 39 23.68	22		32.17	Jan. 8	<i>h. m. s.</i>	4 4 53.20	8		13.05
2		14.28	2		23.61	Feb. 23		31.94	10		53.03	11		13.14
16		14.10	7		23.61	$\gamma^1$ Eridani.			11		53.33	45 Eridani.		
$\delta$ Eridani.			Piazzi III. 165.			Jan. 1	<i>h. m. s.</i>	3 50 31.27	47 Tauri.			Jan. 10	<i>h. m. s.</i>	4 23 38.66
Jan. 7	<i>h. m. s.</i>	3 35 32.34	Jan. 8	<i>h. m. s.</i>	3 40 24.70	7		31.15	Jan. 21	<i>h. m. s.</i>	4 5 11.23	11		38.75
11		32.27	11		24.97	11		31.20	22		11.44	14		38.66
A. S. C. 407.			15		24.82	14		31.14	Feb. 1		11.22			
Jan. 14	<i>h. m. s.</i>	3 35 52.60	31 Tauri.			24		31.18						
15		52.78	Jan. 1	<i>h. m. s.</i>	3 43 25.52	Feb. 23		31.19						
			2		25.44	25		31.13						
			7		25.43	Dec. 31		31.15						



46 Eridani.			51 Eridani.			59 Eridani.			$\omega$ Aurigæ.			$\psi$ Eridani.		
Jan. 16	<i>h. m. s.</i> 4 26	3.74	Jan. 14	<i>h. m. s.</i> 4 29	30.10	Jan. 19	<i>h. m. s.</i> 4 41	17.90	Jan. 11	<i>h. m. s.</i> 4 48	20.29	Jan. 19	<i>h. m. s.</i> 4 53	37.97
17		3.98	15		30.00	21		17.95	14		20.20	22		38.11
19		3.97	16		29.86	22		18.04	15		20.06	28		38.12
A. S. C. 526.			53 Eridani.			$\pi^1$ Orionis.			62 Eridani.			$\eta$ Aurigæ.		
Jan. 11	4 26	24.23	Jan. 19	4 30	48.46	Jan. 8	4 41	50.43	Jan. 16	4 48	28.38	Jan. 7	4 55	14.05
14		24.18	21		48.47	10		50.50	17		28.41	8		13.95
15		24.15	22		48.60	11		50.59	19		28.52	11		14.17
47 Eridani.			A. S. C. 542.			3 Orionis.			10 Camelopardi.			66 Eridani.		
Jan. 21	4 26	26.41	Jan. 19	4 31	55.50	Jan. 14	4 42	38.02	Jan. 22	4 49	7.46	Jan. 17	4 58	47.98
Feb. 12		26.55	21		55.52	15		38.00	28		7.40	19		48.07
18		26.68	22		55.65	16		37.95	Feb. 4		7.56	21		48.17
$\alpha$ Tauri.			$\tau$ Tauri.			60 Eridani.			10 Orionis.			14 Orionis.		
Jan. 1	4 26	41.25	Jan. 24	4 32	35.32	Jan. 19	4 42	56.25	Jan. 7	4 50	12.39	Jan. 14	4 59	7.16
3		41.46				22		56.51	14		12.25	15		7.06
7		41.34				24		56.45	15		12.25	16		7.08
10		41.24	A. S. C. 547.			5 Orionis.			$\epsilon$ Aurigæ.			$\beta$ Eridani.		
22		41.27	Jan. 11	4 35	30.76	Jan. 17	4 44	59.05	Jan. 17	4 50	25.49	Jan. 7	4 59	56.17
23		41.25	15		30.64	21		59.13	23		25.60	8		56.06
24		41.28	16		30.54	22		59.30	Feb. 12		25.85	11		56.27
28		41.43	$\mu$ Eridani.			$\omega$ Eridani.			$\zeta$ Aurigæ.			16 Orionis.		
30		41.26	Jan. 7	4 37	27.14	Jan. 16	4 44	59.04	Jan. 19	4 51	13.94	Feb. 23	5 0	28.52
Feb. 1		41.12	8		27.16	19		59.09	Feb. 14		14.32	$\mu$ Aurigæ.		
4		41.39	10		27.20	24		59.19	63 Eridani.			Feb. 23	5 2	25.46
Mar. 2		41.27	A. S. C. 552.			6 Orionis.			Jan. 11	4 52	13.53	Mar. 6		25.28
April 10		41.35	Jan. 15	4 38	5.23	Jan. 11	4 45	51.39	14		13.24	$\iota$ Leporis.		
11		41.27	16		5.35	14		51.20	15		13.15	Feb. 23	5 4	47.45
23		41.23	19		5.31	15		51.21	64 Eridani.			$\alpha$ Aurigæ.		
24		41.33	58 Eridani.			8 Orionis.			Jan. 16	4 52	26.73	Jan. 7	5 4	48.38
May 7		41.42	Jan. 7	4 40	22.67	Jan. 28	4 45	52.14	17		26.90	10		48.29
10		41.31	8		22.53	Feb. 12		52.22	21		26.93	11		48.31
June 16		41.18	14		22.64	$\pi^2$ Orionis.			$\delta$ Tauri.			14		48.33
July 2		41.13	1 Orionis.			Jan. 7	4 46	2.24	Jan. 29	4 53	28.63	22		48.29
Aug. 3		41.40	Jan. 15	4 41	6.10	8		2.15				23		48.39
Dec. 16		41.32	16		6.05	10		2.18						
20		41.36	17		6.18									
31		41.30												
$\nu^2$ Eridani.														
Jan. 17	4 28	16.57												
19		16.52												
21		16.51												
49 Eridani.														
Jan. 7	4 28	56.09												
8		55.97												
11		56.11												





$\alpha$ Orionis.			$\kappa$ Aurigæ.			51 Hevelii (Cephei) S. P.			$\alpha$ Canis Majoris.			$\theta$ Canis Majoris.		
Jan. 28	h. m. s.	5 46 27.47	Feb. 22	h. m. s.	6 5 7.15	July 18	h. m. s.	6 22 51.84	Jan. 5	h. m. s.	6 38 3.14	Feb. 23	h. m. s.	6 46 42.76
Feb. 16		27.43	23		7.17	24		51.96	27		3.33	26		42.81
Mar. 2		27.42	Mar. 21		7.11	30		55.09	Feb. 6		3.31	Mar. 12		42.73
6		27.45	22		7.12	Aug. 2		53.79	20		3.32			
22		27.46	Sept. 29		7.18	7		53.61	26		3.23			
25		27.38	2 Lynceis.			12 Monocerotis.			Mar. 6		3.34	$\iota$ Canis Majoris.		
27		27.56							9		3.35	Mar. 12	6 48 57.63	
April 18		27.42	Mar. 2	6 5 25.17		Mar. 9	6 23 46.71		25		3.21	22	57.46	
May 7		27.30	27	24.80		14 Monocerotis.			April 9		3.17			
10		27.50	29	24.88					10		3.03			
20		27.32	5 Monocerotis.			Feb. 23	6 26 3.28		12		3.33	$\omega^1$ Geminorum.		
27		27.46				Mar. 2	3.39		18		3.34	Sept. 2	6 52 35.97	
June 1		27.35				9	3.32		19		3.24			
3		27.47	Feb. 23	6 7 0.29		$\nu^2$ Canis Majoris.			Sept. 29		3.16	19 Monocerotis.		
$\theta$ Aurigæ.			7 Monocerotis.			Mar. 12	6 29 39.94		18 Monocerotis.			Feb. 25	6 54 55.25	
Feb. 23	5 48 44.60		Mar. 2	6 11 57.71					Mar. 2	6 39 28.06		Mar. 12	55.53	
25	44.75		9	57.65		25 Geminorum.			12	27.98		April 9	54.96	
27	44.65		12	57.72		Jan. 5	6 31 12.21		22	27.95		$\gamma$ Canis Majoris.		
2 Monocerotis.			$\mu$ Geminorum.			$\epsilon$ Geminorum.			$\psi^2$ Canis Majoris.			Feb. 26	6 56 28.46	
Feb. 23	5 51 25.86		Jan. 27	6 13 13.14		Jan. 27	6 34 1.44		Feb. 25	6 39 30.59		Mar. 2	28.72	
25	25.88		30	13.25		Feb. 22	1.42		36 Geminorum.			A. S. C. 874.		
27	25.88		Feb. 6	13.12		23	1.49		Jan. 5	6 41 53.63		April 10	6 56 48.65	
$\mu$ Orionis.			11	13.20		April 18	1.43		Groombridge 1119.			63 Aurigæ.		
Feb. 23	5 53 31.77		16	13.21		19	1.28		Feb. 5	6 42 6.95		Feb. 23	7 0 34.41	
25	31.67		20	13.22		Sept. 1	1.36		12	7.52		25	34.47	
27	31.67		27	13.19		29	1.38		14	8.62		26	34.36	
66 Orionis.			Mar. 18	13.28		42 Camelopardi.			25	8.78		$\tau$ Geminorum.		
Feb. 27	5 56 28.13		22	13.12		Mar. 2	6 34 8.38		27	10.84		Jan. 27	7 0 53.07	
Mar. 2	28.19		25	13.20		12	8.01		Groombridge 1119 S. P.			April 18	53.15	
$\tau$ Leporis.			April 9	13.11		29	8.02		July 24	6 41 57.31		Dec. 21	52.95	
Feb. 23	6 0 41.47		10	13.26		28 Geminorum.			Aug. 2	63.43		20 Monocerotis.		
A. S. C. 761.			12	13.23		Jan. 5	6 34 32.97		7	65.63		Feb. 27	7 2 13.93	
Mar. 27	6 1 5.91		Sept. 29	13.08		16 Monocerotis.			8	72.81		Mar. 2	13.98	
1 Lynceis.			A. S. C. 793.			15 Lynceis.			12	66.42		9	13.85	
Feb. 27	6 3 3.91		Mar. 9	6 14 49.75		Feb. 23	6 37 45.62		22 Monocerotis.			Mar. 2	7 3 38.62	
Mar. 12	3.92		12	49.81		27	45.52		Mar. 2	6 43 19.26		22	38.45	
29	3.96		77 Orionis.			Mar. 12	45.64		April 9	18.92		April 9	38.51	
			Mar. 9	6 18 57.94					10	19.03				
			12	57.91										

$\delta$ Geminorum.			$\delta^1$ Canis Minoris.			$\delta^3$ Canis Minoris.			$\alpha$ Geminorum.			6 Argûs.		
Jan. 27	h. m. s.	7 10 30.09	Mar. 9	h. m. s.	7 23 44.25	Mar. 9	h. m. s.	7 25 49.08	Jan. 27	h. m. s.	7 34 43.17	Mar. 5	h. m. s.	7 42 24.80
Feb. 4		30.03	12		44.28	12		49.03	28		43.22	23		24.65
6		30.12	April 9		44.00	April 9		43.90						
16		30.16	$\alpha$ Geminorum preceding			$\nu$ Geminorum.			$\beta$ Geminorum.			9 Argûs.		
24		30.15				Sept. 2		7 25 59.57	Jan. 30		7 35 27.37	Mar. 5		7 44 18.83
26		30.18	Jan. 27	7 24 18.51					Feb. 21		27.25	18		18.95
Mar. 2		30.20	30		18.56	25 Monocerotis.			23		27.29	23		18.75
22		30.06	Feb. 4		18.44				24		27.18	A. S. C. 968.		
23		29.72	24		18.67	Feb. 23	7 29 16.47		26		27.20	Feb. 25	7 46 46.54	
April 9		30.12	25		18.80	25	16.43		Mar. 5		27.24	26		46.42
11		30.08	26		18.55	27	16.44		18		27.14	Mar. 23		46.29
Sept. 29		30.14	Mar. 2		18.76	$\alpha$ Canis Minoris.			29		27.32	14 Canis Minoris.		
Dec. 21		30.16	5		18.75				30		27.31	Feb. 23	7 49 59.67	
65 Aurigæ.			8		18.71	Jan. 27	7 30 52.19		April 9		27.43	24		59.64
Mar. 9	7 11 16.82		22		18.46	30	52.25		11		27.34	27		59.79
12		16.87	30		18.56	Feb. 4	52.12		13		27.46	28 Monocerotis.		
$\iota$ Geminorum.			April 4		18.82	24	52.10		15		27.36	Mar. 5	7 53 1.70	
Feb. 23	7 15 43.30		8		18.77	26	52.17		17		27.15	6 Cancri.		
24		43.30	11		18.58	Mar. 5	52.01		18		27.25	Jan. 27	7 53 37.17	
Sept. 29		43.18	13		18.67	8	52.06		24		27.29	28		37.14
1 Canis Minoris.			15		18.57	24	52.08		May 25		27.24	Mar. 23		37.11
Mar. 9	7 16 1.45		17		18.35	29	52.28		28		27.36	24		37.30
12		1.51	18		18.60	30	52.14		29		27.34	13 Argûs.		
22		1.23	19		18.45	April 8	52.15		30		27.17	Feb. 25	7 53 53.34	
$\epsilon$ Canis Minoris.			24		18.55	9	52.11		June 1		27.36	26		53.17
Feb. 27	7 16 50.84		Sept. 29		18.66	11	52.16		3		27.33	27		53.34
Mar. 23		50.60	Dec. 21		18.53	13	52.22		5		27.33	55 Camelopardi.		
April 10		50.71	$\alpha$ Geminorum following.			15	52.12		8		27.27	Feb. 23	7 56 42.03	
$\beta$ Canis Minoris.						17	52.02		11		27.20	29 Monocerotis.		
Feb. 23	7 18 25.03		Jan. 27	7 24 18.93		18	52.14		13		27.28	Mar. 18	8 0 30.01	
24		24.95	30		18.96	19	52.04		14		27.30	23		29.88
25		25.11	Feb. 4		18.96	24	52.12		17		27.21	25		29.68
$\eta$ Canis Minoris.			24		19.12	May 25	52.11		19		27.35	$\beta$ Cancri.		
Feb. 26	7 19 22.49		25		19.17	29	52.09		29		27.25	Mar. 23	8 7 46.58	
27		22.50	Mar. 2		19.26	30	52.12		July 29		27.25	25		46.42
Mar. 2		22.47	5		19.13	31	52.18		Sept. 2		27.24	4 Argûs.		
$\gamma$ Canis Minoris.			8		19.09	June 1	52.10		29		27.32	Feb. 24	7 38 32.15	
Mar. 9	7 19 23.79		22		18.99	3	52.16		Feb. 23	7 37 24.19		27		32.12
22		23.47	23		18.97	5	52.15		25		24.24	Mar. 5		31.86
23		23.47	30		19.11	8	52.06		Mar. 2		24.25	26 Monocerotis.		
			April 4		19.19	13	52.08		$\pi$ Canis Minoris.			4 Argûs.		
			8		19.02	14	52.01		Feb. 23	7 37 24.19		Feb. 24	7 38 32.15	
			11		19.01	17	52.11		25		24.24	27		32.12
			13		19.05	Sept. 2	52.09		Mar. 2		24.25	Mar. 5		31.86
			15		18.92	29	52.20		$\kappa$ Canis Minoris.			4 Argûs.		
			17		18.87	26 Monocerotis.			Feb. 23	7 37 24.19		Feb. 24	7 38 32.15	
			18		18.93	Feb. 24	7 33 33.27		25		24.24	27		32.12
			19		18.93	26	33.09		Mar. 2		24.25	Mar. 5		31.86
			24		19.07	Mar. 2	33.43		$\lambda$ Canis Minoris.			4 Argûs.		
			Sept. 29		19.01				Feb. 23	7 37 24.19		Feb. 24	7 38 32.15	
			Dec. 21		19.06				25		24.24	27		32.12



Groombridge 1418.			$\delta$ Hydræ.			14 Hydræ.			$\pi^1$ Cancri.			$\alpha$ Hydræ.		
Feb. 27	h. m. s.	8 7 61.85	Mar. 18	h. m. s.	8 29 7.70	Mar. 12	h. m. s.	8 41 16.32	April 21	h. m. s.	9 3 28.48	Mar. 24	h. m. s.	9 19 40.55
Mar. 2		61.13	21		7.49	18		16.05				29		40.36
12		60.18	23		7.47	21		15.95	A. S. C. 1117.			30		40.44
18		60.68	$\sigma$ Hydræ.			$\epsilon^2$ Cancri.			Mar. 18		9 4 24.85	April 21		40.36
21		59.54	Mar. 27		8 30 20.21	Mar. 23		8 42 59.39	21		24.71	May 2		40.54
$\lambda$ Cancri.			29		20.20	27		59.56	23		24.70	$\tau^1$ Hydræ.		
Feb. 24		8 10 57.22	6 Hydræ.			$\epsilon^4$ Cancri.			21 Hydræ.			Mar. 18		9 20 58.56
22 Argûs.			Mar. 12		8 32 24.03	Mar. 24		8 46 0.04	Mar. 29		9 4 28.85	21		58.35
Mar. 25		8 15 12.49	18		23.83	$\zeta$ Hydræ.			April 8		28.79	23		58.31
1 Hydræ.			21		23.60	Mar. 23		8 46 52.49	10		28.85	$\lambda$ Leonis.		
Mar. 21		8 16 33.21	$\gamma$ Cancri.			25		52.53	$\pi^2$ Cancri.			Jan. 29		9 22 31.13
23		33.17	Feb. 24		8 33 57.67	29		52.55	Mar. 24		9 6 19.93	30		31.28
2 Hydræ.			25		57.72	A. S. C. 1099.			April 21		19.93	Feb. 25		31.51
Mar. 18		8 18 24.69	9 Hydræ.			Mar. 25		8 52 35.98	23 Hydræ.			April 21		31.15
21		24.39	Mar. 25		8 34 14.97	27		35.91	Mar. 23		9 8 41.90	$\tau^2$ Hydræ.		
23		24.44	29		14.93	30		35.88	April 8		41.72	Mar. 30		9 23 46.17
$\theta$ Cancri.			$\delta$ Cancri.			A. S. C. 1103.			10		41.70	April 8		46.25
Mar. 23		8 22 24.28	Jan. 28		8 35 31.54	Mar. 18		8 56 16.17	83 Cancri.			10		46.14
A. S. C. 1041.			April 21		31.61	21		15.77	Mar. 24		9 9 59.10	$\iota$ Hydræ.		
Mar. 25		8 24 16.75	$\iota$ Cancri.			23		15.77	25		59.05	Mar. 18		9 31 37.77
27		16.90	Mar. 18		8 36 56.46	$\omega$ Hydræ.			40 Lyncis.			21		37.77
29		16.80	22		56.41	Mar. 25		8 57 29.37	Mar. 18		9 11 13.85	25		37.85
A. S. C. 1044 preceding.			$\epsilon$ Hydræ.			29		29.52	21		13.55	$\circ$ Leonis.		
Mar. 18		8 27 17.17	Feb. 21		8 38 14.68	30		29.42	April 10		13.63	Jan. 29		9 32 33.16
21		16.97	24		14.73	$\xi$ Cancri.			27 Hydræ.			30		33.09
27		17.00	Mar. 5		14.67	Jan. 28		9 0 5.51	Mar. 29		9 12 37.16	Feb. 25		33.28
29		16.99	25		14.54	29		5.42	30		37.08	26		33.11
A. S. C. 1044 following.			27		14.55	Mar. 24		5.42	April 8		37.13	$\alpha$ Hydræ.		
Mar. 18		8 27 17.40	29		14.57	25		5.40	A. S. C. 1141.			Mar. 30		9 32 35.09
21		17.24	April 4		14.54	April 21		5.42	Mar. 24		9 15 40.93	April 8		35.10
27		17.33	May 2		14.77	20 Hydræ.			$\alpha$ Hydræ.			10		35.04
29		17.32	$\epsilon$ Hydræ.			Mar. 29		9 1 42.96	Mar. 5		9 19 40.53	$\downarrow$ Leonis.		
			Mar. 22		8 39 54.13	April 8		43.00	18		40.41	April 21		9 34 57.12
			27		53.95	10		42.95	$\epsilon$ Leonis.			Jan. 30		9 36 41.85
			29		53.92							Mar. 12		42.22

$\epsilon$ Leonis.			$\eta$ Leonis.			$\gamma$ Leonis preceding.			33 Sextantis.			$\zeta$ Leonis.		
Mar. 18	<i>h. m. s.</i> 9 36	41.94	Mar. 25	<i>h. m. s.</i> 9 58	32.55	Feb. 27	<i>h. m. s.</i> 10 11	5.03	Mar. 23	<i>h. m. s.</i> 10 33	12.64	Feb. 27	<i>h. m. s.</i> 10 56	42.61
April 4		41.96	$\alpha$ Leonis.			$\gamma$ Leonis following.			40 Leonis Minoris.			April 24		42.78
17		42.03										67 Leonis.		
21		41.81	Feb. 27	9 59	47.63	Feb. 27	10 11	5.20	Mar. 29	10 34	10.47	Mar. 12	11 0	10.24
May 2		41.98	28		47.56	$\mu$ Ursæ Majoris.			April 17		10.94	April 18		10.28
June 15		41.90	Mar. 12		47.58				18		10.83	19		10.31
16		42.00	18		47.49				3 Hydræ & Crateris.			$\delta$ Leonis.		
22 Leonis.			April 17		47.43	Mar. 12	10 12	42.81				Feb. 28	11 5	32.11
Mar. 18	9 42	43.88	19		47.51	April 17		42.74	Mar. 18	10 38	59.08	Mar. 9		32.42
21		43.67	21		47.71	18		42.92	21		58.93	April 13		32.04
25		43.87	23		47.43	23 Sextantis.			25		58.94	19		32.36
6 Sextantis.			26		47.16				53 Leonis.			20		32.31
Mar. 30	9 43	7.09	27		47.18	Mar. 30	10 12	42.70				26		32.29
April 10		7.08	May 2		47.42	30 Leonis Minoris.			Jan. 30	10 40	47.27	27		32.16
17		7.38	9		47.33	Mar. 30	10 16	39.86	Feb. 27		47.50	29		32.14
10 Sextantis.			13		47.32	April 8		39.83	28		47.20	May 1		32.25
April 8	9 47	53.31	14		47.34	$\mu$ Hydræ.			44 Leonis Minoris.			2		32.06
$\nu$ Leonis.			25		47.57							6		32.12
Mar. 25	9 49	33.22	June 15		47.38	Mar. 18	10 18	18.33	Mar. 12	10 41	2.11	7		32.19
A. S. C. 1195.			16		47.45	21		18.33	30		1.91	9		32.07
April 10	9 51	21.74	19		47.32	25		18.15	April 8		1.77	11		32.09
A. S. C. 1199.			July 3		47.45	A. S. C. 1245.			$\nu$ Hydræ & Crateris.			13		32.15
Mar. 18	9 54	44.86	4		47.44	Mar. 12	10 20	34.40				20		32.01
29		44.76	13		47.38	18		34.32	Mar. 18	10 41	41.11	23		32.30
April 8		44.68	15		47.44	23		34.25	21		40.97	24		32.29
$\nu^2$ Hydræ.			$\lambda^2$ Hydræ.			$\epsilon$ Leonis.			29		40.93	25		32.28
Mar. 18	9 57	17.03	Mar. 25	10 2	44.30	Jan. 30	10 24	19.63	6 Hydræ & Crateris.			27		32.38
21		16.97	29		44.14	June 16		19.76				28		32.32
29		16.92	April 8		44.09	17		19.62	Mar. 18	10 45	37.22	29		32.26
21 Leonis Minoris.			Groombridge 1620.			1 Hydræ & Crateris.			25		37.17	30		32.21
Mar. 30	9 57	54.61	Feb. 27	10 5	5.84				April 8		37.00	31		32.17
April 8		54.60	Mar. 2		6.00	$\varphi^3$ Hydræ & Crateris.			55 Leonis.			June 1		32.24
10		54.76	12		5.58	Mar. 25	10 28	25.02				7		32.17
			18		5.51	29		25.12	Mar. 29	10 47	25.22	8		32.19
			21		4.93	April 8		24.92	$\alpha$ Hydræ & Crateris.			16		32.17
			21 Sextantis.									17		32.22
			Mar. 30	10 6	6.89							July 10		32.22
			April 8		6.97							$\delta$ Hydræ & Crateris.		
			10		6.89							Feb. 28	11 11	17.60
			22 Sextantis.									April 20		17.86
			Mar. 29	10 9	37.65	Mar. 18	10 30	44.45				29		17.81
			April 8		37.62	21		44.30				May 6		17.64
			10		37.68	23		44.42				9		17.74
												11		17.71
												13		17.69
												16		17.62



$\epsilon$ Leonis.			$\zeta$ Hydræ & Crateris.			2 Comæ Berenices.			20 Virginis.			49 Virginis.		
June 17	<i>h. m. s.</i>	11 12 49.87	Mar. 18	<i>h. m. s.</i>	11 36 36.47	April 17	<i>h. m. s.</i>	11 56 1.58	Mar. 18	<i>h. m. s.</i>	12 24 53.81	Dec. 28	<i>h. m. s.</i>	12 59 28.06
$\lambda$ Hydræ & Crateris.			25		36.46	Groombridge 1850.			21 Virginis.			$\theta$ Virginis.		
			29		36.38									
Mar. 18		11 15 23.17	93 Leonis.			Mar. 18		11 56 28.20	Mar. 1		12 25 28.30	Jan. 7		13 1 37.15
21		23.11				21		27.63	May 22		28.69	Mar. 29		37.09
25		23.14	Mar. 18		11 39 40.44	25		27.86	23		28.66	May 23		37.15
79 Leonis.			21		40.11	29		28.34	Dec. 27		28.32	24		37.21
			April 18		40.64	30		26.54	$\gamma$ Virginis.			$\alpha$ Virginis.		
May 6		11 15 46.48	$\beta$ Leonis.			$\circ$ Virginis.			April 26			Mar. 27		13 16 43.06
7		46.60										30		43.11
$\kappa$ Hydræ & Crateris.			Feb. 28		11 40 50.59	Mar. 29		11 57 0.18	$\downarrow$ Virginis.			April 26		43.10
			April 13		50.38	April 24		0.57				27		43.30
			17		50.85	A. S. C. 1393.			Jan. 7			30		43.01
Mar. 29		11 19 3.07	26		50.58				Mar. 29		59.15	May 6		43.11
April 8		2.92	May 1		50.49	May 10			30		59.16	22		43.24
17		3.38	6		50.82	10 Virginis.			12 Canum Venaticorum.			23		42.98
$\tau$ Leonis,			9		50.48							24		42.97
			10		50.42	Mar. 1			Mar. 19		12 48 29.12	June 10		43.35
April 24		11 19 39.53	11		50.43	12 1 26.27			April 26		29.37	Dec. 28		43.13
86 Leonis.			16		50.41	$\eta$ Virginis.			29		29.08	Groombridge 2007.		
			23		50.69				30		29.00			
Mar. 21		11 22 4.38	24		50.73	Mar. 1		12 11 40.11	May 30		29.23	Mar. 21		13 21 27.48
23		4.39	June 5		50.62	29		40.11	31		29.24	25		27.14
April 8		4.27	8		50.56	May 22		40.46	June 5		29.21	29		27.32
$\theta$ Hydræ & Crateris.			July 10		50.51	23		40.27	7		29.19	April 8		26.46
			12		50.57	June 19		40.12	8		29.27	18		29.21
Mar. 21		11 28 30.96	15		50.56	17 Virginis.			14		29.18	$\zeta$ Virginis.		
23		30.78	27		50.54				15		29.33			
25		31.00	30		50.55	Mar. 1		12 14 20.69	17		29.28	April 15		
$\upsilon$ Leonis,			Aug. 8		50.50	Groombridge 1884.			19		29.13	82 Virginis.		
			30		50.60				20		29.17			
Feb. 28		11 28 42.35	$\beta$ Virginis.			Mar. 21		12 14 25.74	29		29.15	Jan. 7		13 33 10.11
						25		23.38	July 3		29.17	April 15		9.99
24 Hydræ & Crateris.			Feb. 28		11 42 18.41	29		26.67	4		29.15	89 Virginis.		
			April 24		18.77	April 8		24.46	8		29.09			
Mar. 21		11 30 29.63	$\eta$ Hydræ & Crateris.			10		25.32	29		29.15	Jan. 7		13 41 8.05
29		29.65				A. S. C. 1432.			Aug. 8		29.16	8		8.07
April 8		29.41	Mar. 18		11 47 49.06				9		29.33	May 25		7.80
A. S. C. 1367.			21		49.00	May 11			21		29.30	Dec. 28		8.10
			23		49.09	A. S. C. 1434.			26		29.22	29		7.99
			A. S. C. 1390.						Sept. 3		29.15	$\eta$ Bootis.		
May 9		11 35 41.73	Mar. 1		11 55 31.21	Mar. 1		12 20 5.83	10		29.10			
									Oct. 24		29.21	April 27		13 47 1.18
									Nov. 10		28.98	30		1.21
									12		29.05			

$\eta$ Bootis.			$\alpha$ Bootis.			$\gamma^1$ Libræ.			Groombridge 2283 S.P.			$\sigma$ Scorpii.					
May 6	<i>h. m. s.</i>	13 47 0.99	July 3	<i>h. m. s.</i>	14 8 19.14	Feb. 6	<i>h. m. s.</i>	15 3 3.17	Jan. 11	<i>h. m. s.</i>	15 32 34.41	May 27	<i>h. m. s.</i>	16 11 24.53			
9		1.35	4		19.10	$\beta$ Libræ.			12		33.16	$\alpha$ Scorpii.					
11		1.22	8		19.14	Feb. 6	15 8 20.91	$\alpha$ Serpentis.			Feb. 6	15 36 20.45	May 27	16 19 32.53			
13		1.18	30		19.15	June 12	21.14	May 21	20.51	June 10	32.60	June 10	32.60	June 10	32.60		
20		1.28	Sept. 7		19.14	20	21.19	June 12	20.26	July 9	32.61	July 9	32.61	July 9	32.61		
21		1.08	13		19.15	July 8	21.14	July 1	20.45	12	32.73	12	32.73	12	32.73		
22		1.08	17		19.08	15	21.01	8	20.50	20	32.75	20	32.75	20	32.75		
23		1.13	21		19.16	Aug. 7	21.07	13	20.55	21	32.84	21	32.84	21	32.84		
24		1.09	23		19.08	$\alpha$ Coronæ borealis.			20	20.51	$* D + 15^\circ 40'$			$* D + 15^\circ 40'$			
25		0.92	25		19.05	Feb. 6	15 27 52.23	24	20.54	Aug. 5	20.56	Aug. 5	20.56	Aug. 5	20.56		
28		0.91	26		19.19	April 30	52.52	8	20.57	21	20.51	21	20.51	21	20.51		
29		1.06	Oct. 2		19.00	May 21	52.28	24	20.61	24	20.61	24	20.61	24	20.61		
31		1.16	Dec. 28		19.26	June 3	52.12	26	20.47	26	20.47	26	20.47	26	20.47		
June 7		1.11	29		19.33	12	52.18	27	20.60	27	20.60	27	20.60	27	20.60		
14		1.18	$\epsilon$ Bootis.			20	52.34	Sept. 18	20.55	25	20.47	25	20.47	25	20.47		
15		1.05	April 29	14 37 57.37	July 3	52.23	28	52.32	Oct. 2	20.38	5	20.46	5	20.46	5	20.46	
20		1.06	May 14	57.36	4	52.39	28	52.32	18	20.43	19	20.49	19	20.49	19	20.49	
29		1.03	16	57.34	8	52.39	20	52.40	28	20.53	Nov. 12	20.43	Nov. 12	20.43	Nov. 12	20.43	
July 3		1.16	20	57.46	Aug. 5	52.42	Aug. 5	52.42	$1$ Scorpii.			$1$ Scorpii.			$1$ Scorpii.		
4		1.05	22	57.38	7	52.39	8	52.36	Feb. 6	15 41 18.37	$\delta$ Scorpii.			$\delta$ Scorpii.			
8		0.98	27	57.25	8	52.36	9	52.36	May 27	18.25	$\delta$ Scorpii.			$\delta$ Scorpii.			
30		1.14	June 12	57.47	26	52.32	26	52.32	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
Aug. 5		1.05	13	57.42	Sept. 13	52.34	18	52.36	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
Sept. 4		1.07	19	57.32	21	52.32	23	52.37	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
7		1.11	28	57.33	23	52.37	25	52.38	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
13		1.06	29	57.38	25	52.38	26	52.33	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
Oct. 19		1.05	July 15	57.29	26	52.33	Oct. 2	52.29	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
28		1.12	24	57.32	Oct. 2	52.29	5	52.43	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
Dec. 29		0.94	Sept. 13	57.28	17	52.57	18	52.38	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
A. S. C. 1614.			Oct. 29	57.43	18	52.38	19	52.36	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
May 16	14 4 7.20		Dec. 28	57.30	28	52.46	Nov. 12	52.24	$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
$\alpha$ Bootis.			$\alpha^2$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
May 11	14 8 19.30		Jan. 8	14 41 58.93	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
13	19.24		May 14	58.87	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
14	19.24		16	59.11	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
16	19.21		22	58.84	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
20	19.30		25	58.89	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
21	19.21		June 13	58.81	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
22	19.15		July 15	58.93	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
23	19.04		24	59.00	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
24	19.06		Dec. 28	58.87	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
28	19.10		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
31	19.10		Feb. 6	14 54 39.46	$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.			
June 7	19.19		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
12	19.31		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
13	19.16		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
14	19.14		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
15	19.23		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
20	19.08		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
29	19.14		$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
			$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		
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			$20$ Libræ.			$\chi$ Libræ.			$\delta$ Scorpii.			$\delta$ Scorpii.			$\delta$ Scorpii.		



$\theta$ Ophiuchi.			$\alpha$ Ophiuchi.			$\delta$ Ursæ Minoris.			$\delta$ Ursæ Minoris S. P.			$\beta$ Lyrae.		
Aug. 18	<i>h. m. s.</i> 17 12 7.55		Nov. 22	<i>h. m. s.</i> 17 27 27.73		Feb. 12	<i>h. m. s.</i> 18 24 15.10		Mar. 18	<i>h. m. s.</i> 18 24 14.15		Jan. 13	<i>h. m. s.</i> 18 44 8.36	
			23	27.76		14	14.82		21	14.19		Feb. 9	8.18	
			27	27.72		July 8	17.91		22	15.09		13	8.19	
* D + 32° 2'			Dec. 6	27.83		24	18.51		23	15.92		July 2	8.24	
			7	27.80		27	16.98		25	14.15		9	8.28	
July 3	17 15 30.53		22	27.75		30	13.39		27	15.30		16	8.14	
4	30.61		* D + 34° 39'			Aug. 8	14.04		29	14.69		17	8.07	
8	30.55					26	15.56		30	15.83		18	8.19	
* D + 32° 8'			July 9	17 28 0.52		30	14.91		April 10	13.91		Aug. 2	8.18	
			12	0.68		Sept. 2	15.36		12	16.02		7	8.09	
July 9	17 16 3.07		15	0.70		4	15.02		18	15.45		12	8.00	
12	3.16		* D + 34° 52'			10	14.80		Sept. 1	14.94		13	8.13	
15	3.20		July 4	17 28 59.54		18	15.42		2	15.24		18	8.20	
* D + 34° 50'			8	59.52		23	15.67		29	14.36		24	8.26	
July 3	17 20 59.51		9	59.33		25	15.06		24 Ursæ Minoris.			26	8.19	
4	59.54		20	59.49		26	15.50		July 18	18 30 18.69		27	8.12	
8	59.44		* D + 41° 15'			Oct. 5	15.26		24	18.45		30	8.07	
* D + 35° 4'			July 3	17 45 20.67		7	15.23		30	13.99		31	8.23	
July 3	17 23 43.06		4	20.91		10	14.57		Aug. 2	17.36		Sept. 2	8.21	
4	43.11		8	20.68		17	16.40		7	16.00		3	8.22	
8	43.03		* D + 41° 31'			19	15.40		24 Ursæ Minoris S. P.			4	8.12	
* D + 34° 57'			July 3	17 50 4.20		25	14.90		Jan. 11	18 30 17.91		5	8.20	
July 3	17 26 7.57		4	4.24		28	15.34		14	16.10		9	8.26	
4	7.44		8	4.19		30	15.61		15	17.05		10	8.14	
8	7.38		$\lambda$ Sagittarii.			Nov. 16	14.81		$\alpha$ Lyrae.			11	8.16	
$\alpha$ Ophiuchi.			July 24	18 18 2.29		$\delta$ Ursæ Minoris S. P.			Jan. 13	18 31 29.35		18	8.09	
July 1	17 27 27.86		$\delta$ Ursæ Minoris.			Jan. 1	18 24 14.98		Feb. 9	29.22		21	8.16	
16	27.86					2	14.06		13	29.27		23	8.09	
18	27.78					7	15.31		July 2	29.32		25	8.12	
27	27.75					8	14.59		9	29.25		26	8.18	
29	27.87					11	15.82		16	29.18		28	8.05	
Aug. 7	27.74					14	14.88		17	29.39		30	8.08	
9	27.89					15	15.00		25	29.27		Oct. 5	8.12	
12	27.83					16	13.95		27	29.41		7	8.19	
20	27.84					17	15.08		Aug. 2	29.26		9	8.18	
29	27.82					19	15.50		9	28.90		13	8.21	
Sept. 2	27.83					21	15.13		13	29.30		18	8.23	
4	27.81					22	16.30		18	29.13		19	8.19	
17	27.63					28	15.78		19	29.20		21	8.21	
Oct. 4	27.79					Feb. 5	15.63		Sept. 28	29.28		29	8.27	
13	27.72					6	14.02		30	29.25		Nov. 10	8.19	
Nov. 20	27.72					12	14.29		Oct. 13	29.32		11	8.01	
						14	14.95		21	29.29		16	8.22	
						23	13.36		Nov. 7	29.38		20	8.15	
						25	14.19		11	29.07		22	8.35	
						27	13.88		13	29.10		27	8.22	
						Mar. 2	13.27		23	29.18		Dec. 7	8.17	
						9	12.71		26	29.15		23	8.27	
									Dec. 5	29.19		26	8.22	
									6	29.35		28	8.20	
												$\sigma$ Sagittarii.		
												July 24	18 45 17.03	
												Aug. 20	16.59	

- Sagittarii.			$\delta$ Aquilæ.			$\alpha$ Aquilæ.			$\pi$ Capricorni.			Groombridge 3402 S. P.		
Aug. 20	h. m. s.	18 56 52.91	Sept. 2	h. m. s.	19 17 22.66	Aug. 1	h. m. s.	19 42 55.52	Sept. 19	h. m. s.	20 18 5.90	Feb. 27	h. m. s.	20 45 14.83
$\zeta$ Aquilæ.			3		22.74	13		55.53	69 Aquilæ.			Mar. 2		15.69
July 9 18 58 0.69			5		22.82	19		55.60	Sept. 21 20 21 14.01			12		20.08
17 0.62			11		22.85	20		55.53	70 Aquilæ.			18		20.19
18 0.59			16		22.63	21		55.62	Sept. 21 20 28 20.52			21		21.13
25 0.55			17		22.84	24		55.60	1 Aquarii.			$\zeta$ Cygni.		
Aug. 1 0.62			18		22.82	29		55.62	Sept. 21 20 31 9.73			Jan. 2	21 6 5.21	
2 0.59			19		22.76	31		55.51	$\alpha$ Cygni.			8		5.24
9 0.63			20		22.76	Sept. 5		55.60	Jan. 8 20 35 56.65			9		5.24
12 0.62			Oct. 9		22.82	10		55.56	9 56.66			12		5.16
19 0.61			10		22.84	11		55.56	10 56.81			15		5.20
26 0.60			12		22.85	16		55.70	12 56.65			16		5.23
27 0.49			18		22.74	18		55.58	15 56.75			17		5.40
29 0.63			Nov. 16		22.81	19		55.57	16 56.63			19		5.17
31 0.64			$\gamma$ Aquilæ.			20		55.61	21 56.69			21		5.28
Sept. 2 0.54			Jan. 25	19 38 36.38		21		55.56	23 56.80			26		5.22
3 0.61			April 7	36.29		23		55.54	25 56.64			Feb. 1		5.24
4 0.56			July 17	36.17		26		55.57	26 56.42			Sept. 20		5.19
5 0.60			Aug. 1	36.24		Oct. 7		55.52	28 56.62			28		5.27
11 0.50			18	36.28		12		55.56	30 56.87			30		5.07
17 0.72			5	36.23		Nov. 16		55.55	Oct. 2 56.65			5		5.23
19 0.66			12	36.33		22		55.53	5 56.53			8		5.26
25 0.77			13	36.28		27		55.60	8 56.59			9		5.22
30 0.80			20	36.23		Dec. 6		55.55	10 56.70			10		5.21
Oct. 9 0.55			21	36.32		7		55.60	12 56.72			Nov. 5		5.26
10 0.52			29	36.22		23		55.56	15 56.64			7		5.04
12 0.54			31	36.25		25		55.57	16 56.60			12		5.38
18 0.59			Sept. 3	36.27		26		55.59	17 56.67			13		5.13
Nov. 10 0.56			5	36.19		28		55.58	18 56.73			28		5.20
16 0.55			11	36.32		$\beta$ Aquilæ.			20 56.62			30		5.12
20 0.64			16	36.07		Jan. 2	19 47 24.31		21 56.65			Dec. 6		5.10
22 0.63			17	36.36		18	24.12		22 56.53			16		5.23
23 0.54			19	36.25		April 7	24.14		23 56.59			21		5.13
27 0.55			20	36.32		Aug. 12	24.29		24 56.63			26		5.16
Dec. 5 0.62			Oct. 7	36.23		13	24.26		25 56.64			28		5.18
7 0.55			12	36.28		19	24.20		26 56.60			29 Capricorni.		
21 0.59			Nov. 16	36.28		20	24.23		27 56.73			Oct. 17 21 6 49.58		
25 0.61			20	36.25		24	24.18		28 56.67			$\beta$ Aquarii.		
			22	36.17		Sept. 10	24.23		$\downarrow$ Capricorni.			Jan. 2	21 23 4.73	
			23	36.32		16	24.28		Sept. 19 20 36 33.18			5		4.71
$\delta$ Aquilæ.			27	36.34		19	24.23		3 Aquarii.			Sept. 28		4.82
July 17 19 17 22.87			Dec. 23	36.36		20	24.25		Sept. 21 20 39 14.37			Oct. 4		4.78
18 22.77			25	36.29		21	24.35					9		4.71
Aug. 1 22.85			26	36.32		23	24.21					10		4.71
2 22.73			28	36.27		26	24.24					17		4.64
5 22.64			$\alpha$ Aquilæ.			Oct. 7	24.27					Nov. 5		4.59
19 22.82			Jan. 2	19 42 55.56		12	24.25					28		4.66
20 22.73			8	55.60		Dec. 25	24.25					Dec. 21		4.68
21 22.67			18	55.52		$\alpha^2$ Capricorni.								
27 22.86			25	55.62		Aug. 24	20 9 6.85							
31 22.80			July 17	55.53		Sept. 10	6.99							



Groombridge 3548 S. P.			$\alpha$ Aquarii.			$\zeta$ Pegasi.			$\alpha$ Pegasi.			Groombridge 4101 S. P.		
Feb. 27	<i>h. m. s.</i> 21 30	16-85	Jan. 2	<i>h. m. s.</i> 21 57	30-73	Jan. 5	<i>h. m. s.</i> 22 33	26-10	Feb. 1	<i>h. m. s.</i> 22 56	44-80	Mar. 12	<i>h. m. s.</i> 23 27	46-94
Mar. 2		18-27	15		30-79	8		26-00	2		44-75			
18		18-52	19		30-78	9		26-14	18		44-62	18		47-83
21		18-51	21		30-71	15		26-07						
23		20-11	25		30-71	16		25-99	25		44-60			
$\epsilon$ Pegasi.			Sept. 9		30-78	17		26-09	June 4		44-76	$\iota$ Piscium.		
			24		30-88	Feb. 2		26-12	Sept. 7		44-60			
			Oct. 4		30-72	June 4		26-04	9		44-55	Jan. 20	23 31	40-30
Jan. 9	21 36	16-66	7		30-82	Sept. 7		25-98	12		44-61	June 4		40-29
12		16-67	8		30-68	9		26-03				Sept. 22		40-32
16		16-70							13		44-67	Oct. 15		40-26
19		16-76	15		31-07	12		25-98	22		44-73	20		40-20
21		16-69	26		30-75	13		26-06	Oct. 15		44-47			
			Nov. 28		30-70	Oct. 8		25-98	17		44-49	Nov. 11		40-46
25		16-72	$\kappa$ Aquarii.			15		25-95	20		44-58	19		40-41
26		16-63				17		25-98	Nov. 21		44-82	Dec. 24		40-26
Sept. 28		16-61				25		25-91	Dec. 23		44-50	27		40-33
Oct. 4		16-70	Oct. 17	21 57	43-89	28		25-83	$\phi$ Aquarii.			$\lambda$ Piscium.		
8		16-64	18		43-70	29		25-89						
			$\theta$ Aquarii.			31		26-09	Jan. 19	23 5	58-85	Aug. 26	23 33	49-96
10		16-71				Nov. 21		26-28	June 4		58-90	Oct. 19		49-84
26		16-78				28		26-09	Sept. 21		58-90	20		49-76
Nov. 5		16-42				$\lambda$ Aquarii.			22		58-83	$\omega$ Piscium.		
28		16-69	Sept. 20	22 8	19-95	Oct. 19	22 44	12-59	Nov. 16		59-01			
$\delta$ Capricorni.			21		20-06	$\alpha$ Pegasi.			$\alpha^1$ Piscium.			Jan. 19	23 51	2-82
Oct. 17	21 38	8-76	$\sigma$ Aquarii.			Jan. 8	22 56	44-67				20		2-79
18		8-49				9		44-61	Sept. 21	23 18	40-75	Sept. 22		2-94
A. S. C. 2602.			Sept. 20	22 22	7-22	15		44-81	22		40-74	23		2-85
Oct. 5	21 45	45-68	21		7-34	16		44-65	Groombridge 4101 S. P.			Nov. 16		2-90
A. S. C. 2607.			58 Aquarii.			17		44-66				17		3-00
Oct. 5	21 49	46-68	Oct. 18	22 23	8-79	19		44-69	Feb. 27	23 27	45-40	29 Piscium.		
						21		44-62	Mar. 2		45-28			
									5		43-98	Aug. 26	23 53	34-41
									9		44-98	Oct. 19		34-16
												20		34-08





OBSERVATIONS  
MADE WITH  
THE MURAL CIRCLE,  
IN THE YEAR 1839.

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Jan. 1	(a) $\delta$ Draconis .....	26.7	28.4	+0.1	78 43 27.7	.....	44.3	29.44	43.8	-0 11.7	.....	51.6	+67 22 35.6
	$\alpha$ Orionis.....*	28.5	31.4	+0.1	48 37 30.2	- 0.1	39.9	29.39	40.8	+1 6.2	58.4	58.0	+ 7 22 21.7
	$\mu$ Geminorum.....	48.5	51.0	-0.1	33 24 49.7	- 0.1	.....	.....	.....	+0 38.5	58.6	.....	+22 35 29.9
	(b) 51 (Hev.) Cephei.....	31.9	36.9	-0.1	328 45 34.3	+ 1.2	.....	.....	.....	-0 35.6	57.2	.....	+87 15 58.1
	(c) $\delta$ Ursæ Minoris S. P.	57.5	62.8	+0.1	322 37 0.1	- 0.1	39.3	29.38	40.5	-0 44.8	57.7	.....	+86 35 17.2
	(d) $\delta$ Ursæ Minoris.....	12.8	17.1	-0.1	329 26 14.8	+ 0.2	37.7	29.51	39.0	-0 34.9	57.4	57.7	+86 35 17.6
	$\alpha$ Lyræ.....	32.5	34.7	-0.3	17 22 33.4	- 0.1	.....	.....	.....	+0 18.4	57.4	.....	+38 38 6.0
Jan. 2	(e) Sun South L.....	17.4	20.1	+0.1	79 10 19.6	+ 0.1	.....	.....	.....	+4 58.2	.....	.....	-23 14 20.0
	(f) Sun North L.....	55.6	58.6	+0.1	78 37 57.3	- 1.0	.....	.....	.....	+4 44.5	.....	.....	-22 41 43.1
	(g) $\zeta$ Pegasi.....	23.8	26.8	+0.1	46 0 25.4	- 0.2	37.5	29.54	39.0	+1 1.1	58.6	.....	+ 9 59 31.4
	(h) $\mu$ Pegasi.....	5.8	8.4	-0.1	32 15 7.0	- 0.1	.....	.....	.....	+0 37.2	.....	.....	+23 45 13.6
	(i) Uranus.....	9.0	11.6	+0.1	64 44 10.4	- 0.8	.....	.....	.....	+2 4.4	.....	.....	- 8 45 16.3
	(k) $\beta$ Pegasi.....	39.3	41.5	-0.1	28 47 40.4	+ 0.6	.....	.....	.....	+0 32.4	.....	.....	+27 12 44.3
	(l) $\alpha$ Pegasi.....	36.3	39.8	0.0	41 39 38.1	- 0.3	.....	.....	.....	+ 52.5	57.0	.....	+14 20 27.4
	59 Pegasi.....	2.8	4.0	+0.1	48 9 3.6	- 0.1	37.0	29.54	38.8	+1 5.9	.....	.....	+ 7 50 48.3
	* R. A. 5 <sup>h</sup> 31 <sup>m</sup> 55 <sup>s</sup>	22.3	25.8	-0.1	28 19 24.0	- 0.1	.....	.....	.....	+0 31.8	.....	.....	+27 41 2.0
	* R. A. 5 34 14	11.9	16.3	-0.1	28 21 13.9	- 0.1	36.0	29.51	37.7	+0 31.9	.....	.....	+27 39 12.0
	$\beta$ Aurigæ.....	14.2	17.5	-0.4	11 5 15.4	0.0	.....	.....	.....	+0 11.5	.....	.....	+44 55 30.8
	(m) 51 (Hev.) Cephei.....	32.6	36.0	-0.1	328 45 34.2	+ 1.6	.....	.....	.....	-0 35.9	57.5	.....	+87 15 57.8
	(d) $\delta$ Ursæ Minoris S. P.	59.1	63.0	+0.1	322 37 1.0	- 0.3	.....	.....	.....	-0 45.2	58.4	.....	+86 35 17.8
	Vesta.....	47.7	50.5	-0.1	33 40 49.0	- 0.1	37.0	29.49	37.9	+0 39.3	.....	.....	+22 19 29.5
Jan. 3	(n) $\beta$ Cephei.....	45.9	50.7	-0.5	346 9 47.8	+ 0.1	46.8	28.90	45.9	-0 14.0	57.9	57.0	+69 51 23.1
	(o) $\alpha$ Aquarii.....	31.7	33.8	+0.1	57 5 32.8	- 0.9	.....	.....	.....	+1 27.2	56.1	.....	- 1 6 2.1
	$\zeta$ Cephei.....	14.7	19.4	-0.6	358 36 16.4	0.0	.....	.....	.....	-0 1.4	.....	.....	+57 24 42.0
Jan. 5	(p) $\mu$ Geminorum.....	47.6	50.3	-0.1	33 24 48.9	- 0.2	30.8	28.96	37.5	+0 38.7	57.9	57.9	.....
	Vesta.....	7.9	11.0	-0.1	33 30 9.3	- 0.1	.....	.....	.....	+0 38.9	.....	.....	+22 30 9.8
	54 Aurigæ.....	24.9	27.2	-0.1	27 36 25.9	- 0.1	.....	.....	.....	+0 30.7	.....	.....	+28 24 1.4
	26 Geminorum.....	16.4	18.7	0.0	38 12 17.4	- 0.1	.....	.....	.....	+0 46.2	.....	.....	+17 47 54.4
	(l) $\xi^2$ Geminorum.....	6.9	9.5	0.0	42 56 8.1	- 0.3	.....	.....	.....	+0 54.6	.....	.....	+13 3 55.5
	33 Geminorum.....	15.1	18.0	0.0	39 37 16.4	- 0.1	30.8	28.98	33.5	+0 48.6	.....	.....	+16 22 53.0
Jan. 7	(q) Moon South L.....	2.5	4.3	+0.1	67 21 3.4	+ 2.1	.....	.....	.....	+2 19.4	.....	58.9	-11 22 26.0
	(r) .....	21.8	23.0	+0.1	67 21 22.4	-17.3	28.0	28.71	31.6	+2 19.4	.....	.....	-11 22 25.6
Jan. 8	(s) Sun North L.....	2.8	5.7	+0.1	77 58 24.3	0.0	.....	.....	.....	+4 27.1	.....	.....	-22 1 52.5
	(t) Sun South L.....	49.5	52.5	+0.1	78 30 51.1	- 1.5	32.0	28.90	33.5	+4 39.4	.....	.....	-22 34 30.1
	(u) $\alpha$ Aquilæ.....	11.0	12.8	+0.1	47 33 12.1	- 0.4	.....	.....	.....	+1 3.8	59.4	.....	+ 8 26 43.4
	$\mu$ Geminorum.....	48.1	50.9	-0.1	33 24 49.4	- 0.1	26.8	29.02	30.3	+0 39.2	59.1	.....	+22 35 30.4
	Vesta.....	43.8	45.9	-0.1	33 19 44.8	- 0.1	.....	.....	.....	+0 39.0	.....	.....	+22 40 35.2
	(v) 51 (Hev.) Cephei.....	33.4	37.1	-0.1	328 45 35.1	.....	.....	.....	.....	-0 36.2	58.4	.....	+87 16 0.0
	(w) $\delta$ Ursæ Minoris S. P.	57.8	61.7	+0.1	322 36 59.7	- 0.4	26.8	29.03	29.7	-0 45.6	58.7	.....	+86 35 14.8
	(x) Moon South L.....	55.5	56.0	+0.1	72 38 55.9	+ 8.2	.....	.....	.....	+3 9.5	.....	57.7	-16 41 15.9
	(y) .....	14.8	16.5	+0.1	72 39 15.8	-12.5	.....	.....	.....	+3 9.5	.....	.....	-16 41 15.1
	$\alpha$ Bootis.....	3.0	5.2	0.0	35 59 4.2	- 0.1	26.1	29.26	28.7	+0 43.5	58.3	.....	+20 1 10.1
Jan. 9	(z) Sun North L.....	15.6	18.6	+0.1	77 50 17.2	- 1.9	28.1	29.47	30.2	+4 31.8	.....	.....	-21 53 49.4
	(g) Venus Centre.....	50.0	52.1	+0.1	78 18 51.2	- 0.2	.....	.....	.....	+4 42.6	.....	.....	-22 22 35.9
	$\alpha$ Delphini.....	18.8	20.7	0.0	40 39 19.8	- 0.1	.....	.....	.....	+0 51.6	.....	.....	+15 20 46.4
	(l) $\alpha$ Cygni.....	18.5	21.0	-0.4	11 18 19.4	+ 0.1	.....	.....	.....	+0 12.0	57.8	.....	+44 42 26.2

(a) After the observation of  $\delta$  Draconis the Telescope was unclamped from the Circle, and being moved  $90^\circ 4'$  was again fixed.

(b) At 6<sup>h</sup> 20<sup>m</sup> 12<sup>s</sup>.  
(c) At 6<sup>h</sup> 23<sup>m</sup> 30<sup>s</sup>.  
(d) At Wire III.  
(e) At 18<sup>h</sup> 49<sup>m</sup> 44<sup>s</sup>.  
(f) At 18<sup>h</sup> 51<sup>m</sup> 8<sup>s</sup>.  
(g) At Wire IV.

(h) At Wire V.  
(i) 50<sup>s</sup> after transit.  
(k) At Wire I.  
(l) 40<sup>s</sup> after transit.  
(m) At 6<sup>h</sup> 19<sup>m</sup> 40<sup>s</sup>.  
(n) At 21<sup>h</sup> 27<sup>m</sup> 20<sup>s</sup>.

(o) At 21<sup>h</sup> 58<sup>m</sup> 55<sup>s</sup>.  
(p) 20<sup>s</sup> after transit.  
(q) At 13<sup>h</sup> 16<sup>m</sup> 39<sup>s</sup>.  
(r) At 13<sup>h</sup> 18<sup>m</sup> 0<sup>s</sup>.  
(s) At 19<sup>h</sup> 16<sup>m</sup> 50<sup>s</sup>.  
(t) At 19<sup>h</sup> 18<sup>m</sup> 0<sup>s</sup>.

(u) 1<sup>m</sup> after transit.  
(v) On meridian.  
(w) At 6<sup>h</sup> 26<sup>m</sup> 20<sup>s</sup>.  
(x) At 14<sup>h</sup> 1<sup>m</sup> 31<sup>s</sup>.  
(y) At 14<sup>h</sup> 3<sup>m</sup> 6<sup>s</sup>.  
(z) At 19<sup>h</sup> 22<sup>m</sup> 35<sup>s</sup>.



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Jan. 9	$\epsilon$ Cygni.....	21.4	24.0	-0.2	22 38 22.2	-0.1	28.9	29.52	31.0	+0 25.0	.....	57.7	+33 22 10.6
	$\alpha$ Cephei.....	41.5	43.2	-0.6	354 6 41.7	0.0	.....	.....	.....	-0 6.3	57.1	.....	+61 54 22.3
	$\beta$ Pegasi.....	40.8	43.2	-0.1	28 47 42.0	-0.1	28.0	29.57	31.5	+0 33.1	.....	.....	+27 12 42.7
	(a) 60 Pegasi.....	34.5	36.2	-0.1	30 1 35.2	-0.1	.....	.....	.....	+0 34.8	.....	.....	+25 58 47.8
	65 Pegasi.....	20.5	23.0	0.0	36 3 21.8	-0.1	.....	.....	.....	+0 43.9	.....	.....	+19 56 52.1
Jan. 10	$\alpha$ Persei.....	35.8	39.9	-0.5	6 43 37.4	0.0	42.1	29.43	41.0	+0 6.8	57.6	57.7	+49 17 13.5
	$\alpha$ Tauri.....	11.5	15.8	0.0	39 49 13.7	-0.1	44.0	29.42	42.6	+0 48.3	57.8	.....	+16 10 55.8
	$\gamma$ Orionis.....	47.4	52.2	+0.1	49 47 50.0	-0.1	44.7	29.42	43.5	+1 8.3	.....	.....	+ 6 11 59.5
Jan. 11	$\alpha$ Orionis..... *	28.4	31.8	+0.1	48 37 30.3	-0.1	41.1	29.51	42.5	+1 6.3	57.7	58.6	+ 7 22 22.1
	$\mu$ Geminorum.....	48.0	52.5	-0.1	33 24 50.2	-0.1	.....	.....	.....	+0 38.6	59.3	.....	+22 35 29.9
	Vesta.....	40.8	44.0	-0.1	33 9 42.3	-0.1	.....	.....	.....	+0 38.2	.....	.....	+22 50 38.2
	(b) 51 (Hev.) Cephei.....	31.9	35.6	-0.1	328 45 33.6	+0.2	.....	.....	.....	-0 35.6	58.7	.....	+87 16 0.4
	(c) $\delta$ Ursæ Minoris S. P.....	55.0	60.9	+0.1	322 36 57.4	0.0	41.0	29.52	42.0	-0 44.9	58.5	.....	+86 35 13.9
	$\alpha$ Lyræ..... *	35.5	38.5	-0.3	17 22 36.6	-0.1	42.1	29.61	42.8	+0 18.3	57.4	57.5	+38 38 2.7
Jan. 12	(a) Sun South L.....	46.7	49.5	+0.1	77 55 48.2	-0.3	42.8	29.61	42.9	+4 26.3	.....	.....	-21 59 16.7
	$\alpha$ Aquilæ.....	8.5	11.8	+0.1	47 33 10.4	-0.1	.....	.....	.....	+1 3.8	57.3	.....	+ 8 26 43.4
	$\alpha$ Cygni.....	19.3	22.9	-0.4	11 18 20.8	0.0	43.0	.....	.....	+0 11.6	57.8	.....	+44 42 25.1
Jan. 14	Sun North L.....	19.4	22.8	+0.1	77 3 21.3	-0.1	40.0	29.15	40.9	+4 6.2	.....	58.1	-21 6 29.3
	(d) Groomb. 2283 S. P.....	20.6	24.6	0.0	323 51 22.5	.....	32.2	29.14	36.5	-0 43.2	.....	.....	+87 49 41.2
	* Pleiadum R. A. } 3h 37m 46s. .... }	47.7	50.5	-0.1	32 46 48.9	-0.1	.....	.....	.....	+0 37.9	.....	.....	+23 13 31.4
	Piazzi III. 165.....	54.2	57.5	-0.1	32 38 55.8	-0.1	.....	.....	.....	+0 37.7	.....	.....	+23 21 24.7
	(d) Groombridge 750.....	6.5	10.9	-0.1	330 54 8.6	.....	.....	.....	.....	-0 32.9	.....	.....	+85 7 22.4
	35 Eridani.....	39.4	40.9	+0.1	57 59 40.3	-0.1	.....	.....	.....	+1 34.0	.....	.....	- 2 0 16.1
	66 Tauri.....	57.8	59.2	+0.1	46 54 58.6	-0.1	.....	.....	.....	+1 3.0	.....	.....	+ 9 4 56.6
	$\alpha$ Tauri.....	11.1	14.1	0.0	39 49 12.6	-0.1	.....	.....	.....	+0 49.1	57.4	.....	+16 10 56.5
	$\mu$ Eridani..... *	31.9	33.0	+0.1	59 32 32.4	-0.1	32.0	29.17	34.5	+1 40.0	.....	.....	- 3 33 14.2
	(a) 10 Camelopardi.....	55.4	58.3	-0.6	355 48 56.3	0.0	.....	.....	.....	-0 4.4	.....	.....	+60 12 6.2
	$\alpha$ Aurigæ.....	58.9	62.4	-0.4	10 11 0.2	0.0	.....	.....	.....	+0 10.6	58.0	.....	+45 49 47.3
	$\beta$ Orionis.....	26.9	27.0	+0.1	64 22 26.9	-0.1	.....	.....	.....	+2 2.3	57.9	.....	- 8 23 31.0
	(d) Groombridge 944.....	49.8	53.1	-0.1	330 55 51.3	.....	.....	.....	.....	-0 33.0	.....	.....	+85 5 39.8
	$\gamma$ Orionis.....	47.9	51.8	+0.1	49 47 50.1	-0.1	.....	.....	.....	+1 9.7	.....	.....	+ 6 11 58.4
	$\alpha$ Leporis.....	6.8	8.1	+0.1	73 54 7.6	-0.1	32.1	29.20	34.4	+3 21.5	.....	.....	-17 56 30.9
	* R. A. 5h 31m 55s.....	22.6	26.0	-0.1	28 19 24.2	-0.1	.....	.....	.....	+0 31.8	.....	.....	+27 41 2.2
	* R. A. 5 34 14.....	11.8	15.9	-0.1	28 21 13.7	-0.1	.....	.....	.....	+0 31.8	.....	.....	+27 39 12.7
	$\beta$ Aurigæ.....	12.8	16.2	-0.4	11 5 14.1	0.0	.....	.....	.....	+0 11.5	.....	.....	+44 55 32.5
	Vesta.....	57.8	60.5	-0.1	32 59 59.1	-0.1	.....	.....	.....	+0 38.3	.....	.....	+23 0 20.8
	(e) 51 (Hev.) Cephei.....	30.8	33.7	-0.1	328 45 32.1	+0.7	.....	.....	.....	-0 36.0	58.2	.....	+87 16 1.3
	(d) $\delta$ Ursæ Minoris S. P.....	55.6	59.0	+0.1	322 36 57.3	.....	31.8	29.20	34.0	-0 45.3	59.0	.....	+86 35 13.9
Jan. 15	Sun South L.....	57.2	60.1	+0.1	77 24 58.8	-0.1	35.6	29.39	37.2	+4 17.8	.....	57.7	-21 28 18.8
	$\alpha$ Cygni.....	20.9	23.2	-0.4	11 18 21.7	0.0	.....	.....	.....	+0 11.7	57.9	.....	+44 42 24.3
	$\eta$ Cephei.....	9.9	13.5	-0.6	354 48 11.2	0.0	.....	.....	.....	-0 5.4	.....	.....	+61 12 51.9
	$\zeta$ Cygni.....	19.6	22.8	-0.2	26 26 20.9	-0.1	.....	.....	.....	+0 29.3	57.1	.....	+29 34 7.6
	$\alpha$ Cephei.....	43.5	45.8	-0.6	354 6 44.0	0.0	35.9	29.41	37.2	-0 6.2	57.8	.....	+61 54 19.9
	(a) $\zeta$ Cephei.....	19.0	22.5	-0.6	358 36 20.1	0.0	.....	.....	.....	-0 1.5	.....	.....	+57 24 39.1
	$\eta$ Pegasi..... *	33.4	35.4	-0.2	26 37 34.1	-0.1	.....	.....	.....	+0 29.6	.....	.....	+29 22 54.1
	$\epsilon$ Cephei.....	38.0	40.9	-0.5	350 39 39.0	0.0	.....	.....	.....	-0 9.8	.....	.....	+65 21 28.5
	$\beta$ Pegasi.....	40.2	43.8	-0.1	28 47 42.0	-0.1	36.0	29.47	37.8	+0 32.4	.....	.....	+27 12 43.4
	78 Pegasi.....	7.6	11.9	-0.1	27 32 9.5	-0.1	.....	.....	.....	+0 30.8	.....	.....	+28 28 17.5
	* Pleiadum R. A. } 3h 37m 46s. .... }	48.9	52.2	-0.1	32 46 50.3	-0.1	.....	.....	.....	+0 38.3	.....	.....	+23 13 29.2
	26 Tauri (Pleiad.).....	34.8	37.0	-0.1	32 38 35.9	-0.1	34.0	29.55	35.9	+0 38.1	.....	.....	+23 21 43.8
	(d) Groombridge 750.....	5.9	9.8	-0.1	330 54 7.8	.....	.....	.....	.....	-0 33.1	.....	.....	+85 7 23.0
(a) 30s after transit.		(c) At 6h 24m 50s.				(e) At 6h 21m 30s.							
(b) At 6h 22m 30s.		(d) On meridian.											

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Jan. 15	35 Eridani.....	38.0	40.2	+0.1	57 59 39.2	- 0.1	.....	.....	.....	+1 34.9	.....	57.7	- 2 0 16.3
	37 Eridani.....	55.7	57.1	+0.1	63 19 56.5	- 0.1	.....	.....	.....	+1 57.8	.....	.....	- 7 20 56.5
	66 Tauri.....	57.4	59.5	+0.1	46 54 58.6	- 0.1	.....	.....	.....	+1 3.5	.....	.....	+ 9 4 55.7
	46 Eridani.....	52.9	52.0	+0.1	63 3 52.6	- 0.1	.....	.....	.....	+1 56.5	.....	.....	- 7 4 51.3
	$\mu$ Eridani.....	31.1	32.8	+0.1	59 32 32.2	- 0.1	34.0	29.55	35.8	+1 40.8	.....	.....	- 3 33 15.2
	10 Camelopardi.....	55.2	57.9	-0.6	355 48 56.0	0.0	.....	.....	.....	-0 4.4	.....	.....	+60 12 6.1
	$\gamma$ Orionis.....	49.2	51.9	+0.1	49 47 50.8	- 0.1	.....	.....	.....	+1 10.3	.....	.....	+ 6 11 56.7
	$\alpha$ Leporis.....	5.8	7.1	+0.1	73 54 6.6	- 0.1	.....	.....	.....	+3 23.2	.....	.....	-17 56 32.0
	* R. A. 5 <sup>h</sup> 31 <sup>m</sup> 55 <sup>s</sup>	22.2	25.8	-0.1	28 19 23.9	- 0.1	.....	.....	.....	+0 32.1	.....	.....	+27 41 1.8
	* R. A. 5 34 14	10.7	14.9	-0.1	28 21 12.6	- 0.1	33.7	29.56	35.3	+0 32.1	.....	.....	+27 39 13.1
	$\beta$ Aurigæ.....	12.1	15.1	-0.4	11 5 13.2	0.0	.....	.....	.....	+0 11.6	.....	.....	+44 55 32.9
	(a) Vesta.....	45.3	47.2	-0.1	32 56 46.1	0.0	.....	.....	.....	+0 38.6	.....	.....	+23 3 33.0
	(b) 51 (Hev.) Cephei.....	30.0	33.5	-0.1	328 45 31.6	+ 0.8	.....	.....	.....	-0 36.3	57.8	.....	+87 16 1.6
	(c) $\delta$ Ursæ Minoris S. P.	54.8	58.3	+0.1	322 36 56.5	.....	33.7	29.57	35.4	-0 45.7	58.0	.....	+86 35 13.1
	(d) $\alpha$ Aquilæ.....	8.0	11.0	+0.1	47 33 9.7	- 0.4	.....	.....	.....	+1 5.2	57.1	57.8	+ 8 26 43.3
Jan. 16	Sun North L.....	28.1	30.8	+0.1	76 41 29.5	- 0.1	32.8	29.60	34.3	+4 7.2	.....	.....	-20 44 38.8
	Venus Centre.....	55.2	57.8	+0.1	76 42 56.7	- 0.1	32.5	29.61	34.0	+4 7.7	.....	.....	-20 46 6.5
	$\alpha$ Cygni.....	21.5	23.8	-0.4	11 18 22.3	0.0	.....	.....	.....	+0 11.9	58.5	.....	+44 42 23.6
	$\eta$ Cephei.....	11.1	13.4	-0.6	354 48 11.8	0.0	.....	.....	.....	-0 5.5	.....	.....	+61 12 51.5
	(e) $\alpha$ Aquilæ.....	9.2	12.8	+0.1	47 33 11.2	- 0.2	32.7	29.79	34.0	+1 5.6	59.1	58.6	+ 8 26 42.0
Jan. 17	Sun South L.....	20.5	22.1	+0.1	77 2 21.3	- 0.1	.....	.....	.....	+4 15.0	.....	.....	-21 5 37.6
	47 Piscium.....	2.0	6.6	0.0	39 0 4.3	- 0.1	34.0	29.82	35.2	+0 48.6	.....	.....	+17 0 5.8
	$\pi$ Andromedæ.....	25.3	29.4	-0.2	23 10 27.1	- 0.1	.....	.....	.....	+0 25.7	.....	.....	+32 50 5.9
	$\alpha$ Cassiopeæ.....	28.8	31.3	-0.5	0 21 29.5	0.0	.....	.....	.....	+0 0.3	58.5	.....	+55 39 28.8
	$\beta$ Ceti.....	41.7	43.8	+0.1	74 49 42.9	- 0.1	.....	.....	.....	+3 37.6	.....	.....	-18 52 21.8
	* Pleiadum R. A. } 3 <sup>h</sup> 37 <sup>m</sup> 46 <sup>s</sup> .....	46.3	50.0	-0.1	32 46 47.9	- 0.1	.....	.....	.....	+0 38.9	.....	.....	+23 13 31.9
	Piazzi III. 165.....	54.3	57.8	-0.1	32 38 56.0	- 0.1	31.7	29.83	33.8	+0 38.7	.....	.....	+23 21 24.0
	35 Eridani.....	38.2	39.1	+0.1	57 59 38.8	- 0.1	.....	.....	.....	+1 36.3	.....	.....	- 2 0 16.4
	37 Eridani.....	54.2	55.8	+0.1	63 19 55.1	- 0.1	.....	.....	.....	+1 59.6	.....	.....	- 7 20 56.0
	$\xi$ Eridani.....	32.3	33.5	+0.1	60 6 32.9	- 0.1	.....	.....	.....	+1 44.6	.....	.....	- 4 7 18.8
	46 Eridani.....	51.7	50.0	+0.1	63 3 51.0	- 0.1	.....	.....	.....	+1 58.2	.....	.....	- 7 4 50.5
	$\mu$ Eridani.....	30.9	32.8	+0.1	59 32 31.8	- 0.1	.....	.....	.....	+1 42.2	.....	.....	- 3 33 15.3
	10 Camelopardi.....	54.5	57.5	-0.6	355 48 55.5	0.0	32.0	29.83	33.7	-0 4.5	.....	.....	+60 12 7.6
	$\gamma$ Orionis.....	48.8	52.0	+0.1	49 47 50.3	- 0.1	.....	.....	.....	+1 11.4	.....	.....	+ 6 11 56.7
	$\alpha$ Leporis.....	2.9	4.8	+0.1	73 54 4.0	- 0.1	.....	.....	.....	+3 26.3	.....	.....	-17 56 31.6
	$\xi$ Orionis.....	16.8	18.8	+0.1	58 1 17.8	- 0.1	.....	.....	.....	+1 36.6	.....	.....	- 2 1 55.7
	$\beta$ Aurigæ.....	11.2	14.8	-0.4	11 5 12.6	0.0	.....	.....	.....	+0 11.8	.....	.....	+44 55 34.2
	Vesta.....	34.0	36.3	-0.1	32 50 35.0	- 0.1	.....	.....	.....	+0 39.1	.....	.....	+23 9 44.6
	(f) 51 (Hev.) Cephei.....	31.8	34.0	-0.1	328 45 32.8	+ 0.4	.....	.....	.....	-0 36.9	58.7	.....	+87 16 2.3
	(e) $\delta$ Ursæ Minoris S. P.	55.2	58.8	+0.1	322 36 57.0	.....	29.5	29.83	31.2	-0 46.5	58.3	.....	+86 35 11.9
Jan. 20	$\gamma$ Cephei.....	0.2	4.0	-0.4	339 17 1.6	0.0	39.9	29.30	40.4	-0 22.1	57.8 <sup>1</sup>	57.7	+76 44 18.2
	$\alpha$ Andromedæ.....	13.0	17.9	-0.1	27 48 15.4	- 0.1	.....	.....	.....	+0 30.7	57.8	.....	+28 12 11.7
	$\gamma$ Pegasi.....	44.0	47.0	0.0	41 42 45.6	- 0.1	.....	.....	.....	+0 51.9	57.4	.....	+14 17 20.3
	(g) Moon South L.....	4.9	7.5	+0.1	53 34 6.3	- 9.2	.....	.....	.....	+1 18.9	.....	.....	+ 2 25 41.7
	(h).....	40.8	43.7	+0.1	53 33 42.4	+13.6	39.0	29.30	39.8	+1 18.9	.....	.....	+ 2 25 42.8
Jan. 21	$\alpha$ Cephei.....	45.7	48.5	-0.6	354 6 46.4	0.0	.....	.....	.....	-0 6.2	58.4	57.6	+61 54 17.4
	$\beta$ Cephei.....	51.9	55.2	-0.5	346 9 53.1	0.0	36.0	29.47	37.8	-0 14.6	57.6	.....	+69 51 19.1
	$\eta$ Pegasi.....	35.2	36.5	-0.2	26 37 35.8	- 0.1	35.9	29.50	37.8	+0 29.6	.....	.....	+29 22 52.3
	$\epsilon$ Cephei.....	39.6	42.6	-0.5	350 39 40.6	0.0	.....	.....	.....	-0 9.8	.....	.....	+65 21 26.8
	$\beta$ Pegasi.....	43.1	45.3	-0.1	28 47 44.2	- 0.1	.....	.....	.....	+0 32.5	.....	.....	+27 12 41.0
	47 Piscium.....	2.3	6.8	0.0	39 0 4.5	- 0.1	35.2	29.54	37.4	+0 48.0	.....	.....	+17 0 5.2
	$\downarrow^3$ Piscium.....	11.1	16.6	0.0	37 12 13.7	- 0.1	.....	.....	.....	+0 45.0	.....	.....	+18 47 59.0

(a) 50<sup>s</sup> after transit; faint.(b) At 6<sup>h</sup> 21<sup>m</sup> 20<sup>s</sup>.

(c) On meridian.

(d) At Wire V.

(e) At Wire IV.

(f) At 6<sup>h</sup> 22<sup>m</sup> 12<sup>s</sup>.(g) At 0<sup>h</sup> 23<sup>m</sup> 30<sup>s</sup>.(h) At 0<sup>h</sup> 24<sup>m</sup> 54<sup>s</sup>.



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.		observed.	adopted.									
Jan. 21	(a) $\alpha$ Ursæ Minoris .....	7.0	11.2	-0.1	327	34	9.0	+ 0.4	.....	.....	.....	-0 37.9	57.8	57.6	+88 27 26.1
	(b) Moon South L. ....	34.6	36.6	+0.1	46	39	35.7	-11.3	.....	.....	.....	+1 2.9	.....	.....	+ 9 20 30.3
	(c) .....	13.7	17.2	+0.1	46	39	15.6	+ 9.0	35.0	29.58	37.0	+1 2.9	.....	.....	+ 9 20 30.1
	(d) 26 Tauri (Pleid.) ....	34.0	35.7	-0.1	32	38	34.8	- 0.2	.....	.....	.....	+0 38.3	.....	.....	+23 21 44.7
	Piazzi III. 165.....	53.9	56.9	-0.1	32	38	55.4	- 0.1	33.0	29.64	36.4	+0 38.3	.....	.....	+23 21 24.0
	45 Tauri.....	42.0	45.5	+0.1	50	53	43.9	- 0.1	.....	.....	.....	+1 13.5	.....	.....	+ 5 6 0.3
	$\xi$ Eridani .....	31.9	35.0	+0.1	60	6	33.5	- 0.1	.....	.....	.....	+1 43.7	.....	.....	- 4 7 19.5
	A. S. C. 526.....	37.9	38.1	+0.1	63	9	38.1	- 0.1	.....	.....	.....	+1 57.7	.....	.....	- 7 10 38.1
	A. S. C. 552.....	16.1	19.9	-0.5	349	57	17.4	0.0	33.0	29.66	35.0	-0 10.7	.....	.....	+66 3 50.9
	10 Orionis.....	47.1	49.9	+0.1	54	31	48.5	- 0.1	.....	.....	.....	+1 23.8	.....	.....	+ 1 27 45.4
	16 Orionis.....	49.1	50.8	+0.1	46	22	50.2	- 0.1	.....	.....	.....	+1 2.8	.....	.....	+ 9 37 4.7
	$\alpha$ Aurigæ.....	56.9	60.2	-0.4	10	10	58.1	0.0	.....	.....	.....	+0 10.7	57.8	.....	+45 49 48.8
	$\gamma$ Orionis.....	46.5	49.5	+0.1	49	47	48.2	- 0.1	.....	.....	.....	+1 10.8	56.3	.....	+ 6 11 58.7
	$\alpha$ Leporis.....	3.9	6.3	+0.1	73	54	5.3	- 0.1	33.0	29.69	34.5	+3 24.5	.....	.....	-17 56 32.1
	$\zeta$ Orionis .....	15.8	19.9	+0.1	58	1	17.9	- 0.1	.....	.....	.....	+1 35.7	.....	.....	- 2 1 55.9
	$\theta$ Aurigæ.....	48.5	49.5	-0.3	18	48	48.8	- 0.1	.....	.....	.....	+0 20.4	.....	.....	+37 11 48.5
	(e) A. S. C. 761.....	6.0	10.1	-0.5	346	39	7.6	0.0	.....	.....	.....	-0 14.3	.....	.....	+69 22 4.3
	Vesta.....	38.0	40.0	-0.1	32	38	39.0	- 0.1	.....	.....	.....	+0 38.4	.....	.....	+23 21 40.3
Jan. 22	$\alpha$ Cygni.....	23.6	25.2	-0.4	11	18	24.1	0.0	35.7	30.04	36.5	+0 12.0	58.6	58.2	+44 42 22.1
	$\beta$ Cephei .....	52.5	56.5	-0.5	346	9	54.0	0.0	35.7	.....	.....	-0 14.9	57.9	.....	+69 51 19.1
Jan. 23	(f) Sun North L.....	59.2	62.8	+0.1	75	13	1.2	- 0.6	36.2	30.11	37.0	+3 44.6	.....	57.5	-19 15 47.7
	$\alpha$ Cygni.....	22.6	26.1	-0.4	11	18	24.0	0.0	.....	.....	.....	+0 12.0	58.2	.....	+44 42 21.5
	$\alpha$ Tauri.....	9.9	14.0	0.0	39	49	12.0	- 0.1	38.0	30.12	38.5	+0 50.1	57.7	.....	+16 10 55.5
	$\alpha$ Aurigæ.....	55.0	59.8	-0.4	10	10	56.9	0.0	.....	.....	.....	+0 10.7	56.8	.....	+45 49 49.9
	$\zeta$ Orionis .....	16.9	19.9	+0.1	58	1	18.4	- 0.1	38.7	30.10	39.2	+1 35.8	.....	.....	- 2 1 56.6
	Vesta .....	53.9	57.3	-0.1	32	32	55.6	- 0.1	.....	.....	.....	+0 38.3	.....	.....	+23 27 23.7
	(g) 51 (Hev.) Cephei.....	28.1	31.2	-0.1	328	45	29.5	+ 0.3	.....	.....	.....	-0 36.5	57.5	.....	+87 16 4.2
	(h) $\delta$ Ursæ Minoris S. P.	51.8	55.2	+0.1	322	36	53.5	0.0	39.0	30.11	39.3	-0 46.0	57.3	.....	+86 35 10.0
Jan. 24	(i) $\epsilon$ Eridani.....	9.9	12.8	+0.1	65	59	11.5	- 1.1	40.5	29.98	41.0	+2 12.7	.....	57.9	-10 0 25.2
	$\eta$ Tauri.....	0.5	4.8	-0.1	32	24	2.6	- 0.1	.....	.....	.....	+0 37.7	57.6	.....	+23 36 17.7
	26 Tauri (Pleid.) ..	33.9	37.1	-0.1	32	38	35.5	- 0.1	.....	.....	.....	+0 38.8	.....	.....	+23 21 43.7
	$\gamma^1$ Eridani .....	32.7	34.4	+0.1	69	56	33.6	- 0.1	.....	.....	.....	+2 41.3	58.9	.....	-13 58 16.9
	37 Tauri .....	52.5	57.8	0.0	34	21	55.0	- 0.1	.....	.....	.....	+0 40.6	.....	.....	+21 38 22.4
	45 Tauri .....	41.6	44.1	+0.1	50	53	43.0	- 0.1	.....	.....	.....	+1 13.0	.....	.....	+ 5 6 2.0
	(k) Moon South L.....	38.5	41.5	-0.1	30	58	40.0	- 5.4	.....	.....	.....	+0 35.7	.....	.....	+25 1 47.6
	(l) .....	31.2	32.7	-0.1	30	58	31.9	+ 4.0	.....	.....	.....	+0 35.7	.....	.....	+25 1 46.3
	$\alpha$ Tauri.....	10.1	14.2	0.0	39	49	12.2	- 0.1	40.9	29.98	41.4	+0 49.5	57.2	.....	+16 10 56.3
	$\tau$ Tauri.....	35.0	38.0	-0.1	33	21	36.3	- 0.1	.....	.....	.....	+0 39.1	.....	.....	+22 38 42.6
	(m) A. S. C. 552 .....	15.0	19.5	-0.5	349	57	16.6	0.0	.....	.....	.....	-0 10.6	.....	.....	+66 3 51.9
	10 Orionis .....	48.9	51.1	+0.1	54	31	50.0	- 0.1	.....	.....	.....	+1 23.2	.....	.....	+ 1 27 44.8
	$\iota$ Tauri.....	52.0	55.5	0.0	34	38	53.8	- 0.1	.....	.....	.....	+0 41.0	.....	.....	+21 21 23.2
	(n) $\lambda$ Leporis.....	13.5	15.8	+0.1	69	19	14.8	- 0.4	.....	.....	.....	+2 35.8	.....	.....	-13 20 52.3
	$\zeta$ Orionis .....	17.9	21.9	+0.1	58	1	20.0	- 0.1	41.0	29.93	41.5	+1 34.8	.....	.....	- 2 1 56.8
	$\theta$ Aurigæ.....	47.3	49.5	-0.3	18	48	48.2	- 0.1	.....	.....	.....	+0 20.2	.....	.....	+37 11 49.6
Jan. 25	Sun South L.....	52.4	57.2	+0.1	75	16	54.8	- 0.1	41.8	29.72	42.1	+3 39.9	.....	57.3	-19 19 37.3
	$\alpha$ Cygni.....	23.8	26.2	-0.4	11	18	24.7	0.0	.....	.....	.....	+0 11.7	58.0	.....	+44 42 20.9
	$\beta$ Cephei.....	51.8	56.9	-0.5	346	9	53.9	0.0	41.7	.....	.....	-0 14.6	57.2	.....	+69 51 18.0
	22 Andromedæ.....	59.0	63.0	-0.4	10	50	0.6	0.0	.....	.....	.....	+0 11.3	.....	.....	+45 10 45.4
	$\gamma$ Pegasi.....	42.7	46.7	0.0	41	42	44.8	- 0.1	40.7	29.76	41.7	+0 52.6	56.8	.....	+14 17 20.0
Jan. 26	(o) Sun North L. ....	34.7	37.8	+0.1	74	29	36.4	- 0.7	35.8	30.17	38.5	+3 34.5	.....	57.0	-18 32 13.2
	Venus Centre .....	41.7	45.7	+0.1	73	34	43.8	- 0.1	.....	.....	.....	+3 22.1	.....	.....	-17 37 8.8
	(m) $\alpha$ Cephei.....	46.1	49.2	-0.6	354	6	46.9	0.0	36.4	30.17	38.5	-0 6.3	57.2	.....	+61 54 16.4
(a) At Wire III.		(e) 24 <sup>s</sup> after transit.		(i) 1 <sup>m</sup> after transit.		(m) 30 <sup>s</sup> after transit.									
(b) At 1 <sup>h</sup> 15 <sup>m</sup> 50 <sup>s</sup> .		(f) At 20 <sup>h</sup> 22 <sup>m</sup> 46 <sup>s</sup> .		(k) At 4 <sup>h</sup> 6 <sup>m</sup> 52 <sup>s</sup> .		(n) At Wire IV.									
(c) At 1 <sup>h</sup> 17 <sup>m</sup> 10 <sup>s</sup> .		(g) At 6 <sup>h</sup> 22 <sup>m</sup> 0 <sup>s</sup> .		(l) At 4 <sup>h</sup> 8 <sup>m</sup> 16 <sup>s</sup> .		(o) At 20 <sup>h</sup> 34 <sup>m</sup> 32 <sup>s</sup> .									
(d) 20 <sup>s</sup> before transit.		(h) At 6 <sup>h</sup> 24 <sup>m</sup> 30 <sup>s</sup> .													

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.		observed.	adopted.									
Jan. 26	$\beta$ Cephei .....	52.1	57.5	-0.5	346	9	54.3	0.0	.....	In.	.....	-0 15.0	57.1	57.0	+69 51 17.7
	$\epsilon$ Pegasi .....	34.1	37.2	+0.1	46	51	35.7	-0.1	.....	.....	.....	+1 4.4	56.0	.....	+9 8 17.0
	47 Piscium.....	1.0	5.8	0.0	39	0	3.4	-0.1	35.6	30.18	38.2	+0 49.0	.....	.....	+17 0 4.7
	$\pi$ Andromedæ .....	25.0	28.0	-0.2	23	10	26.3	-0.1	.....	.....	.....	+0 25.9	.....	.....	+32 50 4.9
	(a) 57 Piscium .....	11.9	15.2	0.0	41	24	13.6	-0.2	.....	.....	.....	+0 53.3	.....	.....	+14 35 50.3
	(b) Moon North L. ....	25.1	29.5	-0.1	27	41	27.1	+1.1	.....	.....	.....	+0 31.9	.....	.....	+28 18 56.9
	(c) .....	25.8	29.5	-0.1	27	41	27.5	-1.1	34.5	30.25	37.8	+0 31.9	.....	.....	+28 18 58.7
	(d) 51 (Hev.) Cephei....	27.9	31.3	-0.1	328	45	29.5	+0.2	.....	.....	.....	-0 37.1	57.6	.....	+87 16 4.4
(e) $\epsilon$ Geminorum .....	12.2	14.5	-0.1	30	43	13.4	-0.1	.....	.....	.....	+0 36.1	.....	.....	+25 17 7.6	
Jan. 27	$\epsilon$ Geminorum .....	12.5	14.5	-0.1	30	43	13.5	-0.1	.....	.....	.....	+0 36.2	.....	57.7	+25 17 8.1
	$\alpha$ Canis Majoris .....	46.8	48.0	+0.1	72	27	47.6	-0.1	29.0	29.93	33.2	+3 10.4	57.1	.....	-16 30 0.2
	(f) Groombridge 1119....	17.4	21.8	0.0	326	58	19.7	0.0	.....	.....	.....	-0 39.8	.....	.....	+89 3 17.8
	$\tau$ Geminorum.....	14.2	16.5	-0.2	25	30	15.1	-0.1	.....	.....	.....	+0 29.1	.....	.....	+30 30 13.6
	$\delta$ Geminorum.....	51.9	53.4	-0.1	33	43	52.6	-0.1	.....	.....	.....	+0 40.7	.....	.....	+22 16 24.5
	(g) Moon North L. ....	47.9	51.6	-0.1	29	5	49.6	+4.7	.....	.....	.....	+0 33.9	.....	.....	+26 54 29.5
	(h) .....	56.7	60.5	-0.1	29	5	58.4	-3.8	.....	.....	.....	+0 33.9	.....	.....	+26 54 29.2
	$\alpha$ Geminorum follow. ....	20.9	24.0	-0.2	23	46	22.2	-0.1	.....	.....	.....	+0 26.9	58.5	.....	+32 14 8.7
	$\alpha$ Canis Minoris.....	44.5	45.7	+0.1	50	21	45.1	-0.1	.....	.....	.....	+1 13.6	57.6	.....	+5 37 59.1
	$\kappa$ Geminorum.....	35.5	36.8	-0.1	31	13	36.1	-0.1	28.0	29.91	31.0	+0 37.0	.....	.....	+24 46 44.7
Jan. 28	(i) $\alpha$ Ursæ Minoris .....	7.0	11.5	-0.1	327	34	9.2	+0.1	36.3	29.30	37.2	-0 37.5	57.8	57.8	+88 27 26.0
	A. S. C. 552.....	15.0	19.0	-0.5	349	57	16.4	0.0	34.7	29.30	36.0	-0 10.5	.....	.....	+66 3 51.9
	(k) 16 Orionis.....	50.1	52.1	+0.1	46	22	51.3	-0.3	.....	.....	.....	+1 1.8	.....	.....	+9 37 5.0
	$\alpha$ Aurigæ.....	56.1	59.2	-0.4	10	10	57.2	0.0	.....	.....	.....	+0 10.6	57.5	.....	+45 49 50.0
	(a) $\beta$ Orionis.....	28.0	28.8	+0.1	64	22	28.4	-0.3	.....	.....	.....	+2 2.3	57.5	.....	-8 23 32.6
	$\lambda$ Leporis.....	14.5	15.3	+0.1	69	19	15.0	-0.1	.....	.....	.....	+2 35.1	.....	.....	-13 20 52.2
	$\beta$ Tauri.....	22.8	26.8	-0.1	37	32	24.6	-0.1	.....	.....	.....	+0 30.8	58.6	.....	+28 28 2.5
	$\alpha$ Leporis.....	6.9	9.4	+0.1	73	54	8.3	-0.1	.....	.....	.....	+3 21.7	.....	.....	-17 56 32.1
	52 Orionis .....	13.8	16.5	+0.1	49	36	15.2	-0.1	.....	.....	.....	+1 9.4	.....	.....	+6 23 33.3
	$\theta$ Aurigæ .....	47.5	49.0	-0.3	18	48	48.0	-0.1	32.0	29.27	33.7	+0 20.1	.....	.....	+37 11 49.8
	A. S. C. 761.....	4.9	7.5	-0.5	346	39	5.7	0.0	.....	.....	.....	-0 14.1	.....	.....	+69 22 6.2
	Vesta .....	18.9	21.4	-0.1	32	19	20.1	-0.1	.....	.....	.....	+0 37.4	.....	.....	+23 41 0.4
	(l) 51 (Hev.) Cephei ....	27.5	30.0	-0.1	328	45	28.6	0.0	.....	.....	.....	-0 36.1	58.1	.....	+87 16 5.3
	(m) $\delta$ Ursæ Minoris S. P. ....	50.0	53.4	+0.1	322	36	51.7	-0.1	.....	.....	.....	-0 45.4	57.6	.....	+86 35 8.4
	(n) Groombridge 1119 ...	12.9	18.1	0.0	326	58	15.6	+0.1	31.5	29.24	33.2	-0 38.6	.....	.....	+89 3 20.7
	$\kappa$ Geminorum .....	36.5	37.2	-0.1	31	13	36.8	-0.1	.....	.....	.....	+0 35.8	.....	.....	+24 46 45.3
	6 Cancri.....	59.5	64.0	-0.1	27	46	1.6	-0.1	.....	.....	.....	+0 31.1	.....	.....	+28 14 25.2
	(o) Moon North L. ....	38.2	39.7	-0.1	32	6	38.8	+7.5	.....	.....	.....	+0 37.1	.....	.....	+23 53 34.4
	(p) .....	52.0	54.0	-0.1	32	6	52.8	-5.9	32.0	29.23	33.5	+0 37.1	.....	.....	+23 53 33.8
Jan. 29	16 Orionis.....	49.8	50.2	+0.1	46	22	50.2	-0.1	23.0	28.90	30.1	+1 2.5	.....	57.3	+9 37 4.7
	$\beta$ Orionis.....	25.9	26.3	+0.1	64	22	26.1	-0.1	.....	.....	.....	+2 3.7	56.6	.....	-8 23 32.4
	(q) $\beta$ Tauri.....	21.2	24.2	-0.1	27	32	22.5	-0.1	.....	.....	.....	+0 31.1	56.8	.....	+28 28 3.8
	(r) $\gamma$ Orionis .....	47.7	50.1	+0.1	49	47	49.1	-0.5	.....	.....	.....	+1 10.5	56.0	.....	+6 11 58.1
	$\alpha$ Orionis.....	28.5	31.1	+0.1	48	37	30.0	-0.1	.....	.....	.....	+1 7.7	57.6	.....	+7 22 19.7
	$\eta$ Leporis .....	20.1	20.7	+0.1	70	10	20.5	-0.1	.....	.....	.....	+2 44.0	.....	.....	-14 12 7.1
	(s) Vesta.....	41.6	42.7	-0.1	32	16	42.0	-0.1	22.0	28.88	25.0	+0 37.7	.....	.....	+23 43 37.7
	$\mu$ Geminorum.....	48.6	50.7	-0.1	33	24	49.6	-0.1	.....	.....	.....	+0 39.4	59.7	.....	+22 35 28.4
	13 Monocerotis.....	4.9	6.0	+0.1	48	33	5.7	-0.1	.....	.....	.....	+1 7.6	.....	.....	+7 26 44.1
	$\delta$ Geminorum .....	52.9	55.2	-0.1	33	43	54.0	-0.1	21.2	28.86	23.7	+0 39.9	.....	.....	+22 16 23.5
	$\delta$ Cancri.....	42.9	45.2	0.0	37	15	44.0	-0.1	20.5	28.84	22.4	+0 45.5	.....	.....	+18 44 27.9
	$\xi$ Cancri .....	46.5	48.0	-0.1	33	18	47.2	-0.1	.....	.....	.....	+0 39.5	.....	.....	+22 41 30.7
	(t) Moon North L. ....	13.1	15.7	0.0	36	22	14.3	+10.0	.....	.....	.....	+0 44.3	.....	.....	+19 37 48.7
	(u) .....	33.8	35.0	0.0	36	22	34.3	-11.6	18.4	28.82	20.9	+0 44.3	.....	.....	+19 37 50.3
	(a) At Wire IV.		(f) At 6 <sup>h</sup> 45 <sup>m</sup> 0 <sup>s</sup> .		(l) At 6 <sup>h</sup> 23 <sup>m</sup> 45 <sup>s</sup> .		(g) 24 <sup>s</sup> before transit.								
	(b) At 6 <sup>h</sup> 14 <sup>m</sup> 11 <sup>s</sup> .		(g) At 7 <sup>h</sup> 16 <sup>m</sup> 18 <sup>s</sup> .		(m) At 6 <sup>h</sup> 25 <sup>m</sup> 30 <sup>s</sup> .		(r) 1 <sup>m</sup> after transit.								
(c) At 6 <sup>h</sup> 15 <sup>m</sup> 42 <sup>s</sup> .		(h) At 7 <sup>h</sup> 17 <sup>m</sup> 42 <sup>s</sup> .		(n) At 6 <sup>h</sup> 46 <sup>m</sup> 30 <sup>s</sup> .		(s) 30 <sup>s</sup> after transit.									
(d) At 6 <sup>h</sup> 22 <sup>m</sup> 22 <sup>s</sup> .		(i) At 1 <sup>h</sup> 0 <sup>m</sup> 40 <sup>s</sup> .		(o) At 8 <sup>h</sup> 15 <sup>m</sup> 7 <sup>s</sup> .		(t) At 9 <sup>h</sup> 9 <sup>m</sup> 35 <sup>s</sup> .									
(e) At Wire V.		(k) 36 <sup>s</sup> after transit.		(p) At 8 <sup>h</sup> 16 <sup>m</sup> 31 <sup>s</sup> .		(u) At 9 <sup>h</sup> 11 <sup>m</sup> 24 <sup>s</sup> .									



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.		
		I.	II.								observed.	adopted.			
Jan. 30	Sun South L.....	29.2	30.1	+0.1	73 59 29.8	- 0.1	27.7	28.63	29.8	+3 20.7	.....	57.4	- 18 1 53.0		
Feb. 1	ζ Cygni.....	23.4	25.2	-0.2	26 26 24.0	- 0.1	32.2	29.77	33.0	+0 29.9	56.9	57.5	+29 34 3.7		
	α Andromedæ.....	15.8	18.9	-0.1	27 48 17.3	- 0.1	33.2	29.75	34.5	+0 31.6	58.9	.....	+28 12 8.7		
	(a) α Ursæ Minoris.....	7.8	12.6	-0.1	327 34 10.1	.....	31.9	29.74	33.8	-0 38.4	57.3	.....	+88 27 25.8		
	β Orionis.....	24.9	26.4	+0.1	64 22 25.6	- 0.1	31.5	29.73	32.6	+2 4.8	56.9	.....	- 8 23 32.8		
Feb. 5	(b) Sun North L.....	52.9	55.2	+0.1	71 43 54.2	- 0.1	40.2	29.60	40.9	+2 56.0	.....	58.0	-15 45 52.1		
	β Tauri.....	22.5	26.2	-0.1	27 32 24.1	- 0.1	38.0	29.61	39.2	+0 30.8	58.4	.....	+28 28 3.2		
	δ Orionis.....	51.4	54.8	+0.1	56 24 53.2	- 0.1	.....	.....	.....	+1 28.8	58.7	.....	- 0 25 23.9		
	ε Orionis.....	59.4	62.2	+0.1	57 18 1.0	- 0.1	.....	.....	.....	+1 31.8	57.7	.....	- 1 18 34.7		
	52 Orionis.....	13.5	17.5	+0.1	49 36 15.5	- 0.1	.....	.....	.....	+1 9.4	.....	.....	+ 6 23 33.2		
	(c) η Leporis.....	24.5	23.3	+0.1	70 10 24.0	- 0.4	.....	.....	.....	+2 42.5	.....	.....	-14 12 8.1		
	A. S. C. 761.....	2.8	6.2	-0.5	346 39 4.1	0.0	.....	.....	.....	-0 14.1	.....	.....	+69 22 8.0		
	(d) 46 Aurigæ.....	54.1	57.9	-0.5	6 38 55.6	+ 0.1	37.2	29.63	39.2	+0 6.9	.....	.....	+49 21 55.4		
	(e) δ Ursæ Minoris S. P.	48.7	50.9	+0.1	322 36 49.8	- 0.7	.....	.....	.....	-0 45.4	57.4	.....	+86 35 5.7		
	13 Monocerotis.....	4.6	7.2	+0.1	48 33 6.1	- 0.1	.....	.....	.....	+1 6.9	.....	.....	+ 7 26 45.1		
	A. S. C. 834.....	5.5	9.8	-0.4	338 51 7.2	0.0	.....	.....	.....	-0 23.0	.....	.....	+77 10 13.8		
	(f) Groombridge 1119..	10.4	15.2	0.0	326 58 12.9	+ 0.2	.....	.....	.....	-0 38.6	.....	.....	+89 3 23.5		
	63 Aurigæ.....	58.5	60.3	-0.4	16 25 58.9	- 0.1	.....	.....	.....	+0 17.4	.....	.....	+39 34 41.8		
	1 Canis Minoris.....	12.8	16.0	0.0	44 1 14.3	- 0.1	38.2	29.63	39.4	+0 57.1	.....	.....	+11 58 46.7		
Feb. 6	Sun South L.....	58.5	60.5	+0.1	71 57 59.7	- 0.1	39.9	29.72	40.0	+2 59.2	.....	57.8	-16 0 1.0		
	β Cephei.....	57.0	61.5	-0.5	346 9 58.8	0.0	.....	.....	.....	-0 14.6	58.3	.....	+69 51 13.6		
	α Cassiopeiæ.....	30.5	33.8	-0.5	0 21 31.6	0.0	40.3	29.66	40.0	+0 0.3	57.6	.....	+55 39 25.9		
	(a) α Ursæ Minoris.....	7.2	11.8	-0.1	327 34 9.4	.....	.....	.....	.....	-0 37.5	56.9	.....	+88 27 25.9		
	Vesta.....	0.5	3.3	-0.1	31 57 1.7	- 0.1	42.0	29.45	40.8	+0 36.3	.....	.....	+24 3 19.9		
	μ Geminorum.....	48.8	52.0	-0.1	33 24 50.3	- 0.1	.....	.....	.....	+0 38.4	59.5	.....	+22 35 29.2		
	(a) δ Ursæ Minoris S. P.	46.0	49.0	+0.1	322 36 47.5	.....	.....	.....	.....	-0 44.7	56.7	.....	+86 35 5.0		
	(g) Moon South L.....	40.4	43.3	+0.1	79 55 41.9	+ 3.7	42.5	29.64	42.9	+5 17.8	.....	.....	-24 0 5.6		
	(h).....	58.2	61.9	+0.1	79 56 0.1	-15.7	.....	.....	.....	+5 17.8	.....	.....	-24 0 4.4		
Feb. 7	Sun North L.....	10.0	13.9	+0.1	71 7 11.9	- 0.1	45.4	29.67	42.7	+2 48.5	.....	57.2	-15 9 3.1		
	δ Ursæ Minoris S. P.	45.4	49.0	+0.1	322 36 47.2	- 0.3	.....	.....	.....	-0 43.9	57.2	.....	+86 35 5.8		
	(i) 51 (Hev.) Cephei.....	20.9	25.2	-0.1	328 45 22.9	+ 1.0	48.1	29.35	45.9	-0 34.9	57.3	.....	+87 16 8.2		
Feb. 8	α Arietis.....	16.4	19.8	-0.1	33 18 18.1	- 0.1	47.8	29.37	43.3	+0 37.7	56.2	56.2	.....		
Feb. 12	α Arietis.....	15.9	19.2	-0.1	33 18 17.5	- 0.1	39.1	29.70	42.5	+0 38.8	56.4	56.4	.....		
Feb. 13	(a) α Ursæ Minoris.....	8.0	13.6	-0.1	327 34 10.7	.....	43.5	29.68	43.7	-0 37.3	57.4	57.2	+88 27 23.8		
	α Arietis.....	16.9	20.0	-0.1	33 18 18.4	- 0.1	42.7	29.64	43.6	+0 38.5	56.9	.....	+22 42 0.4		
Feb. 15	Sun South L.....	38.8	40.9	+0.1	69 2 40.1	- 0.1	39.4	29.32	40.5	+2 31.0	.....	57.0	-13 4 14.0		
	Venus Centre.....	23.9	27.0	+0.1	65 2 25.4	- 0.1	40.0	29.26	41.0	+2 4.2	.....	.....	- 9 3 32.5		
	α Pegasi.....	42.2	46.2	0.0	41 39 44.2	- 0.1	.....	.....	.....	+0 51.7	57.3	.....	+14 20 21.2		
	γ Cephei.....	4.2	9.8	-0.4	339 17 6.5	0.0	40.3	.....	.....	-0 22.1	56.8	.....	+76 44 12.6		
Feb. 18	Sun North L.....	52.3	56.0	+0.1	67 27 54.4	- 0.1	33.0	29.33	36.2	+2 21.6	.....	57.6	-11 29 18.3		
	(k) β Pegasi.....	46.5	49.9	-0.1	28 47 48.2	+ 0.1	.....	.....	.....	+0 32.5	57.6	.....	+27 12 36.8		
	Venus Centre.....	47.5	47.9	+0.1	63 34 47.8	- 0.1	33.0	29.33	36.0	+1 58.5	.....	.....	- 7 35 48.6		
	(l) Moon South L.....	33.2	37.9	0.0	42 10 35.5	- 9.0	.....	.....	.....	+0 53.5	.....	.....	+13 49 37.6		
	(m).....	13.6	19.0	0.0	42 10 16.3	+13.2	.....	.....	.....	+0 53.5	.....	.....	+13 49 34.6		
	α Arietis.....	17.5	20.0	-0.1	33 18 18.7	- 0.1	33.3	29.33	36.5	+0 38.8	57.1	.....	+22 42 0.2		
	γ Ceti.....	22.5	25.0	+0.1	53 26 23.8	- 0.1	.....	.....	.....	+1 19.7	.....	.....	+ 2 33 14.2		
	α Ceti.....	21.8	25.8	+0.1	52 32 23.8	- 0.1	31.9	29.34	36.6	+1 17.3	58.2	.....	+ 3 27 16.6		
Feb. 19	Sun South L.....	0.5	3.9	+0.1	67 39 2.4	- 0.1	32.0	29.32	33.8	+2 23.1	.....	58.5	-11 40 26.9		
(a) On meridian.		(d) 36° after transit.		(g) At 15 <sup>h</sup> 19 <sup>m</sup> 0 <sup>s</sup> .		(k) 1 <sup>m</sup> after transit.									
(b) Faint.		(e) At 6 <sup>h</sup> 22 <sup>m</sup> 20 <sup>s</sup> .		(h) At 15 <sup>h</sup> 20 <sup>m</sup> 50 <sup>s</sup> .		(l) At 1 <sup>h</sup> 51 <sup>m</sup> 40 <sup>s</sup> .									
(c) At Wire IV.		(f) At 6 <sup>h</sup> 47 <sup>m</sup> 6 <sup>s</sup> .		(i) At 6 <sup>h</sup> 27 <sup>m</sup> 35 <sup>s</sup> .		(m) At 1 <sup>h</sup> 53 <sup>m</sup> 11 <sup>s</sup> .									

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.										observed.	adopted.	
Feb. 19	(a) Venus Centre .....	10.0	11.0	+0.1	63	5	10.6	- 0.1	32.9	29.31	34.2	+1 56.0	.....	58.5	- 7 6 8.0
	(b) Moon South L.....	22.2	24.0	0.0	36	20	23.1	+ 1.2	.....	.....	.....	+0 43.4	.....	.....	+19 39 50.8
	α Ceti.....	23.7	25.6	+0.1	52	32	24.6	- 0.1	32.8	29.27	35.0	+1 16.9	58.5	.....	.....
Feb. 22	Sun North L.....	8.0	11.0	+0.1	66	2	9.5	- 0.1	40.3	29.12	39.6	+2 9.2	.....	57.3	-10 3 21.3
	(c) β Tauri.....	21.5	24.9	-0.1	27	32	23.0	+ 0.2	38.0	29.11	38.7	+0 30.3	57.3	.....	+28 28 3.8
	δ Orionis.....	53.0	56.8	+0.1	56	24	55.0	- 0.1	.....	.....	.....	+1 27.3	58.0	.....	- 0 25 24.9
	ε Orionis.....	0.8	4.0	+0.1	57	18	2.6	- 0.1	.....	.....	.....	+1 30.2	56.7	.....	- 1 18 35.4
	136 Tauri.....	11.0	16.8	-0.1	28	26	13.7	- 0.1	.....	.....	.....	+0 31.4	.....	.....	+27 34 12.3
	(d) Moon South L.....	58.9	64.2	-0.1	28	1	1.4	+ 0.9	.....	.....	.....	+0 30.9	.....	.....	+27 59 24.1
	(e) Moon North L.....	14.1	20.2	-0.2	27	29	17.0	0.0	.....	.....	.....	+0 30.2	.....	.....	+28 31 10.1
	(f) Vesta.....	11.7	14.6	-0.1	31	23	13.1	- 0.2	.....	.....	.....	+0 35.4	.....	.....	+24 37 9.0
	(g) α Aurigæ.....	14.8	18.7	-0.2	26	27	16.4	- 0.1	38.0	29.09	39.0	+0 28.9	.....	.....	+29 33 12.1
	(h) δ Ursæ Minoris S. P. ....	42.2	45.9	+0.1	322	36	44.1	.....	.....	.....	.....	-0 44.5	57.2	.....	+86 35 2.3
	ε Geminorum.....	12.3	14.8	-0.1	30	43	13.5	- 0.1	.....	.....	.....	+0 34.5	.....	.....	+25 17 9.4
Feb. 23	Sun South L.....	35.9	38.4	+0.1	66	12	37.4	- 0.1	41.2	29.07	40.8	+2 9.8	.....	57.4	-10 13 49.7
	(h) α Ursæ Minoris.....	8.9	13.9	-0.1	327	34	11.3	.....	40.2	29.09	40.8	-0 36.9	56.4	.....	+88 27 23.0
	α Arietis.....	16.3	20.8	-0.1	33	18	18.5	- 0.1	.....	.....	.....	+0 38.0	55.7	.....	+22 42 1.0
	α Ceti.....	22.4	25.5	+0.1	52	32	23.9	- 0.1	38.8	29.11	40.0	+1 15.5	56.3	.....	+ 3 27 18.1
	η Leporis.....	25.7	26.2	+0.1	70	10	26.0	- 0.1	36.8	29.14	38.2	+2 40.1	.....	.....	-14 12 8.6
	Vesta.....	19.2	21.9	-0.1	31	21	20.4	- 0.1	.....	.....	.....	+0 35.5	.....	.....	+24 39 1.6
	(i) τ Leporis.....	28.4	32.1	+0.1	75	6	30.3	- 0.9	.....	.....	.....	+3 35.5	.....	.....	-19 9 7.5
	α Aurigæ.....	16.0	19.3	-0.2	26	27	17.3	- 0.1	.....	.....	.....	+0 29.0	.....	.....	+29 33 11.2
	μ Geminorum.....	48.8	51.9	-0.1	33	24	50.3	- 0.1	.....	.....	.....	+0 38.5	59.9	.....	+22 35 28.7
	(k) δ Ursæ Minoris S. P. ....	43.2	46.8	+0.1	322	36	45.0	-1.2	.....	.....	.....	-0 44.8	56.8	.....	+86 35 1.6
	13 Monocerotis.....	6.3	8.8	+0.1	48	33	7.8	- 0.1	.....	.....	.....	+1 6.0	.....	.....	+ 7 26 43.7
	ε Geminorum.....	12.8	14.8	-0.1	30	43	13.8	- 0.1	.....	.....	.....	+0 34.7	.....	.....	+25 17 9.0
	A. S. C. 834.....	1.0	5.4	-0.4	338	51	2.7	0.0	.....	.....	.....	-0 22.7	.....	.....	+77 10 17.4
	(l) Groombridge 1119....	6.1	11.5	0.0	326	58	8.9	+ 0.2	36.0	29.15	37.6	-0 38.1	.....	.....	+89 3 26.4
	(m) Moon North L.....	31.8	34.5	-0.1	28	20	33.0	+ 4.2	.....	.....	.....	+0 31.5	.....	.....	+27 39 48.7
	(n) .....	37.0	39.8	-0.1	28	20	38.3	- 2.4	.....	.....	.....	+0 31.5	.....	.....	+27 39 50.0
	(o) 63 Aurigæ.....	56.8	59.0	-0.4	16	25	57.4	- 0.1	.....	.....	.....	+0 17.2	.....	.....	+39 34 42.9
	ε Geminorum.....	37.4	40.0	-0.1	27	53	38.7	- 0.1	.....	.....	.....	+0 30.9	.....	.....	+28 6 47.9
	δ <sup>2</sup> Canis Minoris.....	59.0	62.2	+0.1	52	22	0.6	- 0.1	.....	.....	.....	+1 15.6	.....	.....	+ 3 37 41.3
	β Geminorum.....	47.3	53.0	-0.1	27	35	50.0	- 0.1	.....	.....	.....	+0 30.5	58.4	.....	+28 24 37.0
	π Canis Minoris.....	39.2	42.3	0.0	44	50	40.7	- 0.1	.....	.....	.....	+0 58.0	.....	.....	+11 9 18.8
	14 Canis Minoris.....	44.0	44.5	+0.1	53	20	44.3	- 0.1	.....	.....	.....	+1 18.3	.....	.....	+ 2 38 54.9
	29 Monocerotis.....	34.6	36.1	+0.1	58	30	35.4	- 0.1	.....	.....	.....	+1 35.1	.....	.....	- 2 31 13.0
	(h) λ Ursæ Minoris S. P. ....	55.4	60.9	0.0	324	50	58.1	.....	36.5	29.17	37.6	-0 41.3	58.1	.....	+88 49 19.4
Feb. 24	(g) 63 Aurigæ.....	56.4	58.1	-0.4	16	25	56.8	0.0	.....	.....	.....	+0 17.2	.....	58.6	+39 34 44.6
	δ Geminorum.....	52.8	55.0	-0.1	33	43	53.9	- 0.1	.....	.....	.....	+0 39.1	59.1	.....	+22 16 25.7
	ε Geminorum.....	37.6	41.1	-0.1	27	53	39.3	- 0.1	34.9	29.13	36.8	+0 30.9	.....	.....	+28 6 48.5
	δ <sup>2</sup> Canis Minoris.....	0.8	3.5	+0.1	52	22	2.1	- 0.1	.....	.....	.....	+1 15.8	.....	.....	+ 3 37 40.8
	α Canis Minoris.....	49.6	52.0	+0.1	50	21	50.8	- 0.1	.....	.....	.....	+1 10.6	58.3	.....	+ 5 37 57.3
	β Geminorum.....	48.8	52.0	-0.1	27	35	50.3	- 0.1	.....	.....	.....	+0 30.6	58.9	.....	+28 24 37.8
	(f) π Canis Minoris.....	40.0	42.8	0.0	44	50	41.4	- 0.2	.....	.....	.....	+0 58.2	.....	.....	+11 9 19.2
	14 Canis Minoris.....	43.5	44.1	+0.1	53	20	43.9	- 0.1	.....	.....	.....	+1 18.5	.....	.....	+ 2 38 56.3
	(p) Moon North L.....	40.8	42.1	-0.1	30	50	41.3	+ 6.0	.....	.....	.....	+0 35.0	.....	.....	+25 9 36.3
	(q) .....	51.9	53.5	-0.1	30	50	52.6	- 3.5	.....	.....	.....	+0 35.0	.....	.....	+25 9 34.5
	29 Monocerotis.....	34.5	36.2	+0.1	58	30	35.4	- 0.1	.....	.....	.....	+1 35.3	.....	.....	- 2 31 12.0
	λ Cancri.....	53.4	55.7	-0.1	31	28	54.5	- 0.1	.....	.....	.....	+0 35.9	.....	.....	+24 31 28.3
	22 Argûs.....	3.2	6.1	+0.1	68	31	4.7	- 0.1	.....	.....	.....	+2 27.7	.....	.....	-12 32 33.7
	(h) λ Ursæ Minoris S. P. ....	55.8	60.1	0.0	324	50	57.9	.....	.....	.....	.....	-0 41.4	58.1	.....	+88 49 17.9
	A. S. C. 1041.....	41.1	43.1	+0.1	74	59	42.2	- 0.1	.....	.....	.....	+3 34.9	.....	.....	-19 2 18.4
(a) Faint.		subtracted from apparent			(g) 40' after transit.			(m) At 6 <sup>h</sup> 56 <sup>m</sup> 10 <sup>s</sup> .							
(b) Faint. At 2 <sup>h</sup> 49 <sup>m</sup> 48 <sup>s</sup> .		Declination observed for			(h) On meridian.			(n) At 6 <sup>h</sup> 57 <sup>m</sup> 30 <sup>s</sup> .							
(c) 1 <sup>m</sup> after transit.		defect of illuminated disc.			(i) At Wire V.			(o) 20 <sup>s</sup> after transit.							
(d) At 5 <sup>h</sup> 54 <sup>m</sup> 0 <sup>s</sup> . Not fully		(e) At 5 <sup>h</sup> 55 <sup>m</sup> 32 <sup>s</sup> .			(k) At 6 <sup>h</sup> 21 <sup>m</sup> 0 <sup>s</sup> .			(p) At 7 <sup>h</sup> 55 <sup>m</sup> 23 <sup>s</sup> .							
enlightened; 0 <sup>o</sup> .4 to be		(f) At Wire IV.			(l) At 6 <sup>h</sup> 46 <sup>m</sup> 20 <sup>s</sup> .			(q) At 7 <sup>h</sup> 56 <sup>m</sup> 30 <sup>s</sup> .							



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.		observed.	adopted.									
Feb. 24	$\gamma$ Cancr	42.1	43.9	-0.1	33	57	43.0	-0.1	34.0	29.12	35.7	+0 39.5	.....	58.6	+22 2 36.2
Feb. 25	Sun North L.	11.5	14.5	+0.1	64	56	13.0	-0.1	38.7	29.25	38.7	+2 3.9	.....	57.3	- 8 57 19.5
	(a) $\beta$ Pegasi	48.0	52.5	-0.1	28	47	50.3	-0.1	.....	.....	.....	+0 32.0	57.8	.....	+27 12 35.1
	$\gamma$ Cephei	8.0	12.5	-0.4	339	17	9.7	0.0	.....	.....	.....	-0 22.1	57.2	.....	+76 44 9.7
	Venus Centre	58.2	61.0	+0.1	60	3	59.8	-0.1	39.9	29.27	40.0	+1 40.6	.....	.....	- 4 4 43.8
	(b) $\alpha$ Ursæ Minoris	50.3	54.0	-0.1	327	33	52.1	+20.7	.....	.....	.....	-0 37.2	57.3	.....	+88 27 21.7
	(c) .....	7.7	12.0	-0.1	327	34	9.8	+3.7	39.1	29.31	40.0	-0 37.2	.....	.....	+88 27 21.0
	(d) .....	37.0	40.6	-0.1	327	33	38.8	+33.8	.....	.....	.....	-0 37.2	.....	.....	+88 27 21.9
	$\alpha$ Arietis	17.4	20.7	-0.1	33	18	19.0	-0.1	39.8	29.35	40.0	+0 38.3	56.3	.....	+22 42 0.1
	Vesta	38.2	41.0	-0.1	31	17	39.6	-0.1	37.0	29.49	38.2	+0 35.8	.....	.....	+24 42 42.0
	(e) 46 Aurigæ	51.5	55.0	-0.5	6	38	52.8	+0.2	.....	.....	.....	+0 6.8	.....	.....	+49 21 57.5
	(f) $\delta$ Ursæ Minoris S. P.	48.0	51.9	+0.1	322	36	49.9	-5.1	.....	.....	.....	-0 45.3	57.5	.....	+86 35 2.2
	.....	43.0	46.5	+0.1	322	36	44.8	-0.3	.....	.....	.....	-0 45.3	.....	.....	+86 35 1.9
	(g) .....	44.0	47.0	+0.1	322	36	45.5	-1.4	.....	.....	.....	-0 45.3	.....	.....	+86 35 1.5
	(h) .....	52.0	55.7	+0.1	322	36	53.8	-8.7	.....	.....	.....	-0 45.3	.....	.....	+86 35 2.5
	A. S. C. 834	1.5	5.8	-0.4	338	51	3.2	0.0	.....	.....	.....	-0 23.0	.....	.....	+77 10 17.1
	$\pi^3$ Canis Majoris	18.8	20.9	+0.1	75	53	20.0	-0.1	.....	.....	.....	+3 50.4	.....	.....	-19 56 13.0
	(i) 20 Monocerotis	44.7	46.2	+0.1	59	58	45.6	-1.0	36.3	29.51	37.6	+1 41.9	.....	.....	- 3 59 29.2
	1 Canis Minoris	12.2	15.7	0.0	44	1	13.9	-0.1	.....	.....	.....	+0 57.1	.....	.....	+11 58 46.4
	$\delta^2$ Canis Minoris	59.0	62.4	+0.1	52	22	0.7	-0.1	.....	.....	.....	+1 16.6	.....	.....	+ 3 37 40.1
	$\pi$ Canis Minoris	38.2	41.5	0.0	44	50	39.8	-0.1	.....	.....	.....	+0 58.8	.....	.....	+11 9 18.8
	14 Canis Minoris	41.9	43.5	+0.1	53	20	42.8	-0.1	36.0	29.53	37.4	+1 19.3	.....	.....	+ 2 38 55.3
	(k) $\lambda$ Ursæ Minoris S. P.	7.8	13.6	0.0	324	51	10.6	-13.5	.....	.....	.....	-0 41.9	57.6	.....	+88 49 17.9
	.....	55.5	61.9	0.0	324	50	58.6	-0.7	.....	.....	.....	-0 41.9	.....	.....	+88 49 18.7
	(l) .....	59.6	65.0	0.0	324	51	2.2	-4.4	.....	.....	.....	-0 41.9	.....	.....	+88 49 18.6
	(m) $\gamma$ Cancr	42.3	44.0	-0.1	33	57	43.2	-0.2	.....	.....	.....	+0 39.9	.....	.....	+22 2 34.4
	(n) $\lambda$ Ursæ Minoris S. P.	21.0	26.4	0.0	324	51	23.6	-26.1	.....	.....	.....	-0 41.9	.....	.....	+88 49 18.3
	(o) Moon North L.	49.4	51.9	0.0	34	40	50.6	+9.1	.....	.....	.....	+0 41.0	.....	.....	+21 19 16.6
	(p) .....	4.1	6.5	0.0	34	41	5.2	-5.6	35.0	29.54	36.7	+0 41.0	.....	.....	+21 19 16.7
	$\lambda$ Leonis	54.2	58.9	-0.1	32	19	56.5	-0.1	.....	.....	.....	+0 37.6	.....	.....	+23 40 23.3
	$\phi$ Leonis	43.3	46.2	+0.1	45	22	45.0	-0.1	34.7	29.56	36.5	+1 0.1	.....	.....	+10 37 12.3
Feb. 26	Sun South L.	7.8	11.0	+0.1	65	6	9.4	-0.1	39.5	29.50	39.0	+2 5.7	.....	56.8	- 9 7 18.2
	(m) $\beta$ Pegasi	47.9	50.9	-0.1	28	47	49.4	-0.1	.....	.....	.....	+0 32.2	56.9	.....	+27 12 35.3
	$\alpha$ Canis Majoris	57.9	62.0	+0.1	72	28	0.2	-0.1	39.2	29.33	40.2	+3 2.4	57.3	.....	-16 30 5.7
	(m) $\pi^3$ Canis Majoris	22.9	25.2	+0.1	75	53	24.2	-0.4	.....	.....	.....	+3 47.6	.....	.....	-19 56 14.6
	(q) 20 Monocerotis	45.5	47.1	+0.1	59	58	46.5	-0.9	.....	.....	.....	+1 40.6	.....	.....	- 3 59 29.4
	1 Canis Minoris	12.6	17.1	0.0	44	1	14.8	-0.1	.....	.....	.....	+0 56.3	.....	.....	+11 58 45.8
	$\delta^3$ Canis Minoris	44.8	47.4	+0.1	52	16	46.1	-0.1	.....	.....	.....	+1 15.3	.....	.....	+ 3 42 55.5
	$\alpha$ Canis Minoris	48.0	51.0	+0.1	50	21	49.5	-0.1	.....	.....	.....	+1 10.3	56.7	.....	+ 5 37 57.1
	4 Argûs	58.8	60.8	+0.1	70	9	0.0	-0.1	39.2	29.30	40.2	+2 40.0	.....	.....	-14 10 43.1
	(r) $\lambda$ Ursæ Minoris S. P.	31.0	35.3	0.0	324	51	33.1	-37.7	.....	.....	.....	-0 41.2	56.4	.....	+88 49 17.4
	28 Monocerotis	30.4	32.8	+0.1	56	56	31.6	-0.1	.....	.....	.....	+1 29.4	.....	.....	- 0 57 4.1
	(s) $\lambda$ Ursæ Minoris S. P.	7.8	13.5	0.0	324	51	10.6	-14.5	.....	.....	.....	-0 41.2	.....	.....	+88 49 18.1
	.....	53.0	59.8	0.0	324	50	56.3	-0.7	.....	.....	.....	-0 41.2	.....	.....	+88 49 17.6
	(t) .....	56.1	62.9	0.0	324	50	59.4	-4.5	.....	.....	.....	-0 41.2	.....	.....	+88 49 16.9
	$\phi$ Leonis	43.5	46.5	+0.1	45	22	45.2	-0.1	39.0	29.28	40.0	+0 59.0	.....	.....	+10 37 12.7
	(u) Moon North L.	56.1	60.9	0.0	39	29	58.5	+6.0	.....	.....	.....	+0 48.0	.....	.....	+16 30 4.3
	(x) .....	12.5	16.8	0.0	39	30	14.6	-10.4	.....	.....	.....	+0 48.0	.....	.....	+16 30 4.6
Feb. 27	Sun North L.	29.8	31.2	+0.1	64	11	30.5	-0.1	35.8	29.21	38.8	+2 0.4	.....	57.3	- 8 12 33.5
	(y) $\beta$ Pegasi	47.9	50.8	-0.1	28	47	49.4	-0.1	.....	.....	.....	+0 32.1	56.7	.....	+27 12 35.9
	$\gamma$ Cephei	8.9	13.2	-0.4	339	17	10.5	0.0	.....	.....	.....	-0 22.2	57.3	.....	+76 44 9.0
	Venus Centre	33.9	36.0	+0.1	59	2	35.2	-0.1	38.8	29.23	39.4	+1 36.7	.....	.....	- 3 3 14.5
	$\alpha$ Andromedæ	19.1	23.6	-0.1	27	48	21.3	-0.1	.....	.....	.....	+0 30.7	58.1	.....	+28 12 5.4
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(a) 15 <sup>s</sup> after transit.		(f) At 6 <sup>h</sup> 17 <sup>m</sup> 41 <sup>s</sup> .		(l) At 8 <sup>h</sup> 31 <sup>m</sup> 56 <sup>s</sup> .		(p) At 8 <sup>h</sup> 51 <sup>m</sup> 40 <sup>s</sup> .		(t) At 8 <sup>h</sup> 32 <sup>m</sup> 1 <sup>s</sup> .							
(b) At 0 <sup>h</sup> 41 <sup>m</sup> 30 <sup>s</sup> .		(g) At 6 <sup>h</sup> 27 <sup>m</sup> 49 <sup>s</sup> .		(m) At Wire IV.		(q) 1 <sup>m</sup> after transit.		(u) At 9 <sup>h</sup> 41 <sup>m</sup> 43 <sup>s</sup> .							
(c) At 0 <sup>h</sup> 52 <sup>m</sup> 56 <sup>s</sup> .		(h) At 6 <sup>h</sup> 32 <sup>m</sup> 58 <sup>s</sup> .		(n) At 8 <sup>h</sup> 46 <sup>m</sup> 54 <sup>s</sup> .		(r) At 7 <sup>h</sup> 50 <sup>m</sup> 55 <sup>s</sup> .		(x) At 9 <sup>h</sup> 42 <sup>m</sup> 59 <sup>s</sup> .							
(d) At 1 <sup>h</sup> 26 <sup>m</sup> 37 <sup>s</sup> .		(i) At 7 <sup>h</sup> 3 <sup>m</sup> 30 <sup>s</sup> .		(o) At 8 <sup>h</sup> 50 <sup>m</sup> 22 <sup>s</sup> .		(s) At 8 <sup>h</sup> 2 <sup>m</sup> 31 <sup>s</sup> .		(y) 36 <sup>s</sup> after transit.							
(e) 45 <sup>s</sup> after transit.		(k) At 8 <sup>h</sup> 3 <sup>m</sup> 8 <sup>s</sup> .													

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.	
		I.	II.								observed.	adopted.		
Feb. 27	(a) $\alpha$ Ursæ Minoris .....	42.4	47.5	-0.1	327 33 44.9	+28.6	.....	.....	.....	-0 37.2	57.7	57.3	+88 27 21.0	
	(b) .....	6.7	11.0	-0.1	327 34 8.8	+5.1	.....	.....	.....	-0 37.2	.....	.....	+88 27 20.6	
	(c) .....	11.0	16.2	-0.1	327 34 13.5	.....	.....	.....	.....	-0 37.2	.....	.....	+88 27 21.0	
	(d) .....	6.4	10.8	-0.1	327 34 8.5	+6.2	.....	.....	.....	-0 37.2	.....	.....	+88 27 19.8	
	(e) .....	39.5	43.9	-0.1	327 33 41.7	+32.0	38.6	29.23	39.8	-0 37.2	.....	.....	+88 27 20.8	
	(f) Vesta .....	4.1	6.4	-0.1	31 14 5.2	-0.1	35.0	29.36	37.8	+0 35.7	.....	.....	+24 46 16.5	
	46 Aurigæ .....	52.2	56.0	-0.5	6 38 53.7	0.0	.....	.....	.....	+0 6.8	.....	.....	+49 21 56.8	
	(g) $\delta$ Ursæ Minoris S. P. ....	43.5	45.9	+0.1	322 36 44.7	-1.5	.....	.....	.....	-0 45.2	56.5	.....	+86 35 0.7	
	A. S. C. 816 .....	43.9	46.3	+0.1	73 54 45.2	-0.1	.....	.....	.....	+3 21.5	.....	.....	-17 57 9.3	
	43 Camelopardi .....	2.5	6.7	-0.5	346 57 4.0	0.0	.....	.....	.....	-0 13.8	.....	.....	+69 4 7.1	
	$\pi^3$ Canis Majoris .....	19.2	20.9	+0.1	75 53 20.2	-0.1	.....	.....	.....	+3 50.3	.....	.....	-19 56 13.1	
	(h) 20 Monocerotis .....	42.5	44.9	+0.1	59 58 43.9	-0.6	35.0	29.40	37.6	+1 41.8	.....	.....	-3 59 27.8	
	$\epsilon$ Canis Minoris .....	37.1	38.5	+0.1	46 24 37.9	-0.1	.....	.....	.....	+1 2.0	.....	.....	+9 35 17.5	
	$\delta^3$ Canis Minoris .....	44.5	46.9	+0.1	52 16 45.7	-0.1	.....	.....	.....	+1 16.2	.....	.....	+3 42 55.5	
	4 Argûs .....	55.1	56.9	+0.1	70 8 56.2	-0.1	.....	.....	.....	+2 42.0	.....	.....	-14 10 40.8	
	(i) $\lambda$ Ursæ Minoris S. P. ....	55.2	60.0	0.0	324 51 57.5	-61.4	.....	.....	.....	-0 41.8	57.0	.....	+88 49 17.0	
	(k) 28 Monocerotis .....	30.9	32.2	+0.1	56 56 31.6	-0.3	.....	.....	.....	+1 30.6	.....	.....	-0 57 4.6	
	(h) 29 Monocerotis .....	33.9	36.0	+0.1	58 30 35.0	-0.3	34.9	29.42	37.5	+1 36.2	.....	.....	-2 31 13.6	
	(l) $\lambda$ Ursæ Minoris S. P. ....	54.9	59.9	0.0	324 50 57.4	-0.5	.....	.....	.....	-0 41.8	.....	.....	+88 49 17.8	
	(k) A. S. C. 1041 .....	38.5	40.9	+0.1	74 59 39.8	-0.4	.....	.....	.....	+3 36.8	.....	.....	-19 2 18.9	
	Cancri .....	47.2	49.2	-0.2	26 39 48.0	-0.1	.....	.....	.....	+0 29.7	.....	.....	+29 20 39.7	
	(m) A. S. C. 1099 .....	25.6	29.5	-0.5	8 13 27.1	0.6	.....	.....	.....	+0 8.5	.....	.....	+47 47 21.7	
	(n) $\lambda$ Ursæ Minoris S. P. ....	42.5	46.0	0.0	324 51 44.2	-48.1	.....	.....	.....	-0 41.8	.....	.....	+88 49 17.0	
	20 Hydræ .....	16.9	17.1	+0.1	64 7 17.0	-0.1	35.1	29.45	37.4	+2 1.3	.....	.....	-8 8 20.9	
	(h) 26 Hydræ .....	37.1	39.7	+0.1	67 16 38.4	-0.7	.....	.....	.....	+2 20.3	.....	.....	-11 18 0.7	
	10 Leonis Minoris .....	6.8	9.0	-0.3	18 54 7.6	-0.1	.....	.....	.....	+0 20.2	.....	.....	+37 6 29.6	
	Groomb. 3548 S. P. ....	2.5	6.5	+0.1	322 23 4.7	-0.2	.....	.....	.....	-0 45.8	.....	.....	+86 21 21.4	
	$\nu$ Ursæ Majoris .....	28.9	30.9	-0.6	356 13 29.4	0.0	.....	.....	.....	-0 4.0	.....	.....	+59 47 31.9	
	A. S. C. 1199 .....	56.0	59.4	+0.1	68 29 57.8	-0.1	.....	.....	.....	+2 29.0	.....	.....	-12 31 29.4	
	$\alpha$ Leonis .....	1.9	3.9	0.0	43 15 2.9	-0.1	.....	.....	.....	+0 55.6	57.8	.....	+12 44 58.9	
	17 Sextantis .....	15.6	16.2	+0.1	63 36 15.9	-0.1	35.0	29.47	37.2	+1 58.7	.....	.....	-7 37 17.2	
	(o) Groombridge 1620 *	39.5	43.0	-0.1	330 57 41.0	+0.3	.....	.....	.....	-0 33.0	.....	.....	+85 3 49.0	
	$\gamma$ Leonis .....	8.1	11.0	0.0	35 21 9.5	-0.1	.....	.....	.....	+0 43.6	.....	.....	+20 39 4.3	
	(p) Moon North L. ....	0.7	4.5	0.0	44 58 2.7	+12.2	.....	.....	.....	+0 59.1	.....	.....	+11 1 43.3	
	(q) .....	18.0	23.1	0.0	44 58 20.6	-8.5	.....	.....	.....	+0 59.1	.....	.....	+11 1 46.1	
	$\chi$ Leonis .....	43.2	44.4	+0.1	47 47 44.0	-0.1	35.1	29.50	37.1	+1 5.2	.....	.....	+8 12 8.2	
	$\nu$ Virginis .....	7.4	10.0	+0.1	48 34 8.8	-0.1	.....	.....	.....	+1 7.1	.....	.....	+7 25 41.5	
	$\beta$ Leonis .....	58.6	61.5	0.0	40 31 59.9	-0.1	.....	.....	.....	+0 50.7	57.1	.....	+15 28 6.8	
	Mars North L. ....	4.5	7.1	+0.1	50 35 5.9	-0.1	.....	.....	.....	+1 12.0	.....	.....	+5 24 39.5	
	* R. A. 11 <sup>h</sup> 59 <sup>m</sup> 20 <sup>s</sup>	19.8	21.8	+0.1	50 35 20.9	-0.1	35.1	29.53	37.2	+1 12.0	.....	.....	+5 24 24.5	
	Feb. 28	(r) 53 Leonis .....	23.9	27.5	0.0	44 36 25.6	-0.3	43.0	29.41	42.0	+0 57.2	.....	57.5	+11 23 35.0
		$\delta$ Leonis .....	7.2	12.0	0.0	34 36 9.5	-0.1	.....	.....	.....	+0 40.0	57.1	.....	+21 24 8.1
		(s) $\delta$ Hydræ & Crateris...	57.7	59.1	+0.1	69 52 58.6	+0.3	.....	.....	.....	+2 36.9	58.7	.....	-13 54 38.3
		(t) Moon South L. ....	23.8	27.6	+0.1	51 18 25.9	+9.3	.....	.....	.....	+1 12.3	.....	.....	+4 41 10.0
		(u) .....	40.4	45.2	+0.1	51 18 43.0	-11.5	.....	.....	.....	+1 12.3	.....	.....	+4 41 13.7
$\nu$ Leonis .....		48.0	51.4	+0.1	55 55 49.8	-0.1	.....	.....	.....	+1 25.5	.....	.....	+0 3 42.3	
$\nu$ Virginis .....		9.8	12.1	+0.1	48 34 11.1	-0.1	.....	.....	.....	+1 5.6	.....	.....	+7 25 40.9	
$\beta$ Leonis .....		58.4	62.8	0.0	40 32 0.5	-0.1	.....	.....	.....	+0 49.6	56.6	.....	+15 28 7.5	
(r) $\beta$ Virginis .....		30.4	32.9	+0.1	53 19 31.8	-0.5	.....	.....	.....	+1 17.7	.....	.....	+2 40 8.5	
Mars South L. ....		17.4	20.3	+0.1	50 27 18.8	-0.1	43.2	29.39	42.8	+1 10.1	.....	.....	+5 32 28.7	
Mar. 1	(x) Sun South L. ....	35.5	36.5	+0.1	63 58 36.2	-0.1	47.8	29.24	44.4	+1 56.4	.....	56.8	-7 59 35.7	
Mar. 2	(y) $\alpha$ Ursæ Minoris .....	56.5	61.0	-0.1	327 33 58.7	+14.3	45.0	29.56	44.9	-0 37.1	56.2	56.2	+88 27 20.3	
	$\alpha$ Arietis .....	16.5	20.8	-0.1	33 18 18.6	-0.1	45.0	29.58	45.3	+0 38.2	55.4	.....	+22 41 59.5	
<div>(a) At 0<sup>h</sup> 38<sup>m</sup> 5<sup>s</sup>. (f) 30<sup>s</sup> after transit. (l) At 8<sup>h</sup> 18<sup>m</sup> 0<sup>s</sup>. (p) At 10<sup>h</sup> 28<sup>m</sup> 54<sup>s</sup>. (t) At 11<sup>h</sup> 14<sup>m</sup> 10<sup>s</sup>.</div> <div>(b) At 0<sup>h</sup> 51<sup>m</sup> 30<sup>s</sup>. (g) At 6<sup>h</sup> 20<sup>m</sup> 46<sup>s</sup>. (m) 24<sup>s</sup> after transit. (q) At 10<sup>h</sup> 30<sup>m</sup> 20<sup>s</sup>. (u) At 11<sup>h</sup> 15<sup>m</sup> 33<sup>s</sup>.</div> <div>(c) On meridian. (h) 40<sup>s</sup> after transit. (n) At 8<sup>h</sup> 56<sup>m</sup> 5<sup>s</sup>. (r) At Wire V. (x) Tremulous.</div> <div>(d) At 1<sup>h</sup> 12<sup>m</sup> 15<sup>s</sup>. (i) At 7<sup>h</sup> 42<sup>m</sup> 30<sup>s</sup>. (o) At 10<sup>h</sup> 7<sup>m</sup> 18<sup>s</sup>. (s) At Wire I. (y) At 1<sup>h</sup> 17<sup>m</sup> 50<sup>s</sup>.</div> <div>(e) At 1<sup>h</sup> 26<sup>m</sup> 0<sup>s</sup>. (k) At Wire IV.</div>														



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Mar. 2	22 Monocerotis.....	21.6	25.1	+0.1	56 13 23.5	- 0.1	40.2	<i>In.</i> 29.70	42.4	+1 27.9	.....	56.2	- 0 13 55.1
	(a) $\delta$ Geminorum.....	47.9	52.5	-0.1	33 43 50.2	- 0.1	.....	.....	.....	+0 39.4	55.9	.....	+22 16 26.7
	$\epsilon$ Canis Minoris.....	35.8	37.5	+0.1	46 24 36.8	- 0.1	.....	.....	.....	+1 1.9	.....	.....	+ 9 35 17.6
	$\alpha$ Geminorum follow.	16.7	20.6	-0.2	23 46 18.4	- 0.1	.....	.....	.....	+0 26.0	56.3	.....	+32 14 11.9
	$\delta^3$ Canis Minoris.....	43.0	45.2	+0.1	52 16 44.1	- 0.1	.....	.....	.....	+1 16.1	.....	.....	+ 3 42 56.1
	(b) 4 Argûs.....	57.7	59.4	+0.1	70 8 58.7	- 1.2	.....	.....	.....	+2 41.8	.....	.....	-14 10 43.1
	(b) 16 Argûs.....	7.8	11.6	+0.1	74 44 9.8	- 1.3	40.4	29.72	41.5	+3 32.6	.....	.....	-18 46 44.9
	(b) 22 Argûs.....	1.0	3.8	+0.1	68 31 2.4	- 1.1	.....	.....	.....	+2 28.7	.....	.....	-12 32 33.8
	$\gamma$ Cancri.....	46.8	48.9	-0.2	26.39 47.7	- 0.1	.....	.....	.....	+0 29.6	.....	.....	+29 20 39.0
	Groomb. 3402 S. P.	56.0	59.8	0.0	324 38 58.0	- 0.5	.....	.....	.....	-0 42.0	.....	.....	+88 37 19.3
	(c) A. S. C. 1099.....	25.8	29.1	-0.5	8 13 27.0	0.0	.....	.....	.....	+0 8.5	.....	.....	+47 47 20.7
	20 Hydræ.....	17.8	19.0	+0.1	64 7 18.4	- 0.1	40.5	29.73	41.5	+2 1.0	.....	.....	- 8 8 23.1
	(d) 26 Hydræ.....	37.8	39.1	+0.1	67 16 38.5	- 0.7	.....	.....	.....	+2 20.0	.....	.....	-11 18 1.6
	10 Leonis Minoris....	7.0	9.8	-0.3	18 54 8.1	- 0.1	.....	.....	.....	+0 20.2	.....	.....	+37 6 28.0
	(e) Groomb. 3548 S. P.	2.0	6.0	+0.1	322 23 4.2	- 0.4	.....	.....	.....	-0 45.7	.....	.....	+86 21 21.9
	$\nu$ Ursæ Majoris.....	27.5	30.3	-0.6	356 13 28.4	0.0	.....	.....	.....	-0 4.0	.....	.....	+59 47 31.8
	A. S. C. 1199.....	57.9	62.0	+0.1	68 30 0.1	- 0.1	.....	.....	.....	+2 29.0	.....	.....	-12 31 32.8
	(f) Groombridge 1620...	37.4	42.0	-0.1	330 57 39.7	.....	39.3	29.75	41.4	-0 33.0	.....	.....	+85 3 49.5
	$\mu$ Ursæ Majoris.....	20.2	24.2	-0.4	13 42 21.7	- 0.1	.....	.....	.....	+0 14.4	.....	.....	+42 18 20.2
	37 Ursæ Majoris.....	27.4	31.1	-0.6	358 6 28.6	0.0	.....	.....	.....	-0 2.0	.....	.....	+57 54 29.6
	(g) $\alpha$ Hydræ & Crateris	21.0	23.5	+0.1	73 24 22.4	- 0.3	.....	.....	.....	+3 16.0	.....	.....	-17 26 41.9
	(d) 67 Leonis.....	45.5	49.0	-0.1	30 28 47.2	- 0.1	39.1	29.76	41.2	+0 34.8	.....	.....	+25 31 34.3
	(h) Groomb. 4101 S. P.	56.2	61.0	+0.1	322 26 58.6	- 0.1	.....	.....	.....	-0 45.7	.....	.....	+86 25 16.6
	$\nu$ Virginis.....	8.5	10.7	+0.1	48 34 9.7	- 0.1	.....	.....	.....	+1 7.1	.....	.....	+ 7 25 39.5
	$\beta$ Leonis.....	53.0	61.8	0.0	40 31 59.8	- 0.1	.....	.....	.....	+0 50.7	57.0	.....	+15 28 5.8
	Mars South L.....	44.4	48.0	+0.1	50 10 46.3	- 0.1	38.5	29.75	41.2	+1 11.0	.....	.....	+ 5 48 59.0
Mar. 4	Sun North L.....	43.8	43.9	+0.1	62 17 44.1	- 0.1	40.0	29.84	40.8	+1 52.4	.....	57.5	- 6 18 38.9
	$\gamma$ Cephei.....	8.9	14.0	-0.4	339 17 10.9	0.0	.....	.....	.....	-0 22.5	55.9	.....	+76 44 9.1
	$\alpha$ Andromedæ.....	19.7	24.7	-0.1	27 48 22.5	- 0.1	.....	.....	.....	+0 31.2	59.0	.....	+28 12 3.9
	Venus Centre.....	45.0	47.3	+0.1	56 27 46.4	- 0.1	40.9	29.83	41.2	+1 29.0	.....	.....	- 0 28 17.8
	(i) $\alpha$ Ursæ Minoris.....	51.6	56.8	-0.1	327 32 54.2	+82.1	.....	.....	.....	-0 37.8	58.4	.....	+88 27 19.0
	(k).....	4.9	9.2	-0.1	327 34 7.0	+10.1	40.0	29.83	41.0	-0 37.8	.....	.....	+88 27 18.2
	(l).....	42.6	46.2	-0.1	327 32 44.4	+91.4	.....	.....	.....	-0 37.8	.....	.....	+88 27 19.5
	$\alpha$ Ceti.....	20.9	24.8	+0.1	52 32 22.8	- 0.1	39.3	29.84	40.5	+1 17.3	56.8	.....	+ 3 27 17.5
Mar. 5	$\alpha$ Geminorum follow.	17.2	20.7	-0.2	23 46 18.7	- 0.1	32.8	29.95	38.5	+0 26.6	57.4	57.1	+32 14 11.9
	(m) 25 Monocerotis.....	40.2	41.0	+0.1	59 44 40.7	- 0.4	.....	.....	.....	+1 43.3	.....	.....	- 3 45 26.5
	(c) $\alpha$ Canis Minoris.....	45.0	47.4	+0.1	50 21 46.2	- 0.3	.....	.....	.....	+1 12.8	55.4	.....	+ 5 37 58.4
	$\beta$ Geminorum.....	46.1	50.9	-0.1	27 35 48.4	- 0.1	.....	.....	.....	+0 31.6	58.6	.....	+28 24 37.2
	6 Argûs.....	11.0	13.4	+0.1	72 47 12.2	- 0.1	.....	.....	.....	+3 12.7	.....	.....	-16 49 27.7
	(m) 28 Monocerotis.....	28.1	30.9	+0.1	56 56 29.5	- 0.4	.....	.....	.....	+1 32.7	.....	.....	- 0 57 4.7
	(n) 16 Argûs.....	1.9	4.0	+0.1	74 44 3.1	+ 0.2	32.1	29.94	36.3	+3 38.1	.....	.....	-18 46 44.3
	(f) Groomb. 4101 S. P.	57.1	61.2	+0.1	322 26 59.1	.....	.....	.....	.....	-0 46.9	.....	.....	+86 25 15.1
	(o) $\beta$ Leonis.....	56.5	60.1	0.0	40 31 58.2	+ 0.2	.....	.....	.....	+0 51.9	57.0	.....	+15 28 6.8
Mars North L.....	11.5	14.9	+0.1	49 45 13.3	- 0.1	29.5	29.89	34.4	+1 11.7	.....	.....	+ 6 14 32.2	
Mar. 6	$\epsilon$ Canis Minoris.....	36.1	37.3	+0.1	46 24 36.8	- 0.1	27.4	29.62	33.9	+1 3.5	.....	57.5	+ 9 35 17.3
	$\alpha$ Geminorum follow.	17.5	20.7	-0.2	23 46 18.8	- 0.1	.....	.....	.....	+0 26.6	57.6	.....	+32 14 12.2
	(c) 25 Monocerotis.....	39.5	39.4	+0.1	59 44 39.6	- 0.3	.....	.....	.....	+1 43.4	.....	.....	- 3 45 25.2
	(p) $\alpha$ Canis Minoris.....	47.5	49.0	+0.1	50 21 48.3	- 0.6	.....	.....	.....	+1 13.0	57.4	.....	+ 5 37 56.8
	13 Argûs.....	20.9	22.8	+0.1	53 13 22.0	- 0.1	.....	.....	.....	+1 20.9	.....	.....	+ 2 46 14.7
	(q) Groombridge 1418...	8.9	12.8	-0.1	330 25 10.7	+ 2.4	.....	.....	.....	-0 34.6	.....	.....	+85 36 19.0
	22 Argûs.....	57.0	59.2	+0.1	68 30 58.2	- 0.1	26.2	29.63	32.9	+2 32.9	.....	.....	-12 32 33.5
	A. S. C. 1099.....	25.5	28.1	-0.5	8 13 26.4	- 0.1	.....	.....	.....	+0 8.7	.....	.....	+47 47 22.5
	(r) 20 Hydræ.....	15.8	16.1	+0.1	64 7 15.9	- 1.2	25.9	29.62	31.7	+2 4.5	.....	.....	- 8 8 21.7
	26 Hydræ.....	34.9	35.5	+0.1	67 16 35.2	- 0.1	.....	.....	.....	+2 23.9	.....	.....	-11 18 1.5
(a) 18 <sup>s</sup> after transit.		(e) At 9 <sup>h</sup> 32 <sup>m</sup> 5 <sup>s</sup> .		(i) At 0 <sup>h</sup> 22 <sup>m</sup> 0 <sup>s</sup> .		(m) 30 <sup>s</sup> after transit.		(p) 40 <sup>s</sup> after transit.					
(b) 1 <sup>m</sup> after transit.		(f) On meridian.		(k) At 1 <sup>h</sup> 14 <sup>m</sup> 50 <sup>s</sup> .		(n) 20 <sup>s</sup> before transit.		(q) At 8 <sup>h</sup> 12 <sup>m</sup> 53 <sup>s</sup> .					
(c) At Wire IV.		(g) 20 <sup>s</sup> after transit.		(l) At 1 <sup>h</sup> 43 <sup>m</sup> 0 <sup>s</sup> .		(o) At Wire II.		(r) 1 <sup>m</sup> 10 <sup>s</sup> after transit.					
(d) At Wire V.		(h) At 11 <sup>h</sup> 28 <sup>m</sup> 35 <sup>s</sup> .											



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.			
		I.	II.		°	'	"						observed.	adopted.	°	'	"	
Mar. 6	10 Leonis Minoris....	4.2	7.0	-0.3	18	54	5.3	- 0.1	.....	.....	.....	+0 20.8	.....	57.5	+37	6	31.5	
	(a) Groomb. 3548 S. P....	4.0	7.2	+0.1	322	23	5.8	- 0.1	.....	.....	.....	-0 46.9	.....	.....	+86	21	21.3	
	υ Ursæ Majoris.....	29.0	30.8	-0.6	356	13	29.4	0.0	.....	.....	.....	-0 4.1	.....	.....	+59	47	32.2	
	μ Ursæ Majoris.....	20.6	23.0	-0.4	13	42	21.3	- 0.1	26.4	29.63	32.3	+0 14.8	.....	.....	+42	18	21.5	
	37 Ursæ Majoris.....	28.0	31.0	-0.6	358	6	28.8	0.0	.....	.....	.....	-0 2.1	.....	.....	+57	54	30.8	
	42 Leonis Minoris....	54.6	56.6	-0.2	24	28	55.5	- 0.1	.....	.....	.....	+0 27.6	.....	.....	+31	31	34.5	
	(b) Groomb. 4101 S. P....	58.8	62.2	+0.1	322	27	0.5	- 0.2	.....	.....	.....	-0 46.8	.....	.....	+86	25	16.0	
	Mars South L.....	57.1	60.2	+0.1	49	36	58.6	- 0.1	26.2	29.61	31.0	+1 11.2	.....	.....	+ 6	22	47.8	
Mar. 12	Sun South L.....	19.9	21.7	+0.1	59	43	20.9	- 0.1	38.0	29.77	37.2	+1 41.4	.....	57.8	- 3	44	4.4	
	α Geminorum follow.	17.4	21.5	-0.2	23	46	19.3	- 0.1	.....	.....	.....	+0 26.4	58.3	.....	+32	14	12.2	
	(c) 25 Monocerotis.....	43.0	45.4	+0.1	59	44	44.3	+ 0.1	34.0	29.75	36.0	+1 42.3	.....	.....	- 3	45	28.9	
	(d) Groombridge 1418....	7.4	12.1	-0.1	330	25	9.7	+ 0.4	33.7	29.73	35.7	-0 34.1	.....	.....	+85	36	21.8	
	ο Ursæ Majoris.....	52.1	56.0	-0.6	354	45	53.5	0.0	.....	.....	.....	-0 5.6	.....	.....	+61	15	9.9	
	A. S. C. 1041.....	37.8	40.7	+0.1	74	59	39.3	- 0.1	.....	.....	.....	+3 39.6	.....	.....	-19	2	21.0	
	* R. A. 8 <sup>h</sup> 28 <sup>m</sup> 20 <sup>s</sup> ...	51.2	54.8	0.0	35	42	52.9	- 0.1	.....	.....	.....	+0 43.0	.....	.....	+20	17	22.0	
	ι Cancri.....	46.1	48.9	-0.2	26	39	47.3	- 0.1	.....	.....	.....	+0 30.1	.....	.....	+29	20	40.5	
	(e) ε Hydræ.....	32.9	35.0	+0.1	48	59	34.0	- 0.3	.....	.....	.....	+1 8.8	.....	.....	+ 7	0	15.3	
	(f) Groomb. 3402 S. P....	53.3	57.9	0.0	324	38	55.6	.....	.....	.....	.....	-0 42.7	.....	.....	+88	37	15.1	
	ι Ursæ Majoris.....	33.6	36.9	-0.5	7	20	34.8	- 0.1	.....	.....	.....	+0 7.7	.....	.....	+48	40	15.4	
	A. S. C. 1103.....	6.2	9.9	-0.3	16	55	7.8	- 0.1	.....	.....	.....	+0 18.2	.....	.....	+39	5	31.9	
	A. S. C. 1117.....	43.3	47.1	-0.1	34	3	45.1	- 0.1	33.7	29.74	35.4	+0 40.5	.....	.....	+21	56	32.3	
	A. S. C. 1135.....	35.1	37.7	-0.2	333	59	36.2	0.0	.....	.....	.....	-0 29.4	.....	.....	+82	1	51.0	
	(f) Groomb. 3548 S. P.	0.8	5.0	+0.1	322	23	2.9	.....	.....	.....	.....	-0 46.4	.....	.....	+86	21	18.7	
	(g) φ Ursæ Majoris.....	3.9	8.2	-0.5	1	12	5.6	+ 0.2	.....	.....	.....	+0 1.2	.....	.....	+54	48	50.8	
	(f) Groombridge 1620 ..	38.5	42.7	-0.1	330	57	40.4	.....	33.0	29.74	35.2	-0 33.5	.....	.....	+85	3	50.9	
	μ Ursæ Majoris.....	19.5	22.7	-0.4	13	42	20.8	- 0.1	.....	.....	.....	+0 14.6	.....	.....	+42	18	22.5	
	37 Ursæ Majoris.....	25.3	29.2	-0.6	358	6	26.7	0.0	.....	.....	.....	-0 2.0	.....	.....	+57	54	33.1	
	42 Leonis Minoris....	54.4	57.1	-0.2	24	28	55.5	- 0.1	.....	.....	.....	+0 27.3	.....	.....	+31	31	35.1	
	α Hydræ & Crateris	23.8	26.8	+0.1	73	24	25.4	- 0.1	.....	.....	.....	+3 18.5	.....	.....	-17	26	46.0	
	67 Leonis.....	45.4	48.1	-0.1	30	28	46.6	- 0.1	32.8	29.72	34.9	+0 35.3	.....	.....	+25	31	36.0	
	ο Leonis.....	17.9	21.5	+0.1	49	5	19.8	- 0.1	.....	.....	.....	+1 9.1	.....	.....	+ 6	54	29.0	
	(h) Groomb. 4101 S. P....	56.2	59.9	+0.1	322	26	58.2	- 0.9	.....	.....	.....	-0 46.3	.....	.....	+86	25	13.2	
	(i) * R. A. 11 <sup>h</sup> 29 <sup>m</sup> 2 <sup>s</sup> ...	21.9	26.0	+0.1	48	50	24.1	- 0.2	.....	.....	.....	+1 8.5	.....	.....	+ 7	9	25.4	
	Mars South L.....	57.4	60.9	+0.1	48	45	59.3	- 0.1	.....	.....	.....	+1 8.3	.....	.....	+ 7	13	50.3	
	β Leonis.....	57.6	60.9	+0.1	40	31	59.3	- 0.1	32.5	29.70	34.8	+0 51.3	57.3	.....	+15	28	7.3	
	Mar. 13	Sun North L.....	36.8	38.5	+0.1	58	47	37.7	- 0.1	39.5	29.62	38.5	+1 36.9	.....	.....	- 2	48	16.7
	Mar. 18	(k) δ Leonis.....	6.1	10.0	0.0	34	36	8.1	- 0.2	.....	.....	.....	+0 41.0	57.7	57.0	+21	24	8.1
		δ Hydræ & Crateris *	55.1	57.5	+0.1	69	52	56.5	- 0.1	.....	.....	.....	+2 40.8	57.3	.....	-13	54	40.2
		(l) σ Leonis.....	19.6	23.2	+0.1	49	5	21.5	- 0.4	35.0	29.61	37.0	+1 8.5	.....	.....	+ 6	54	27.4
		(m) Mars South L.....	1.9	5.2	+0.1	47	58	3.6	+ 0.8	.....	.....	.....	+1 5.9	.....	.....	+ 8	1	46.7
(f) Groomb. 4101 S. P.		50.5	54.8	+0.1	322	26	52.8	.....	.....	.....	.....	-0 45.9	.....	.....	+86	25	9.9	
β Leonis.....		57.4	60.0	0.0	40	31	58.8	- 0.1	.....	.....	.....	+0 50.8	56.5	.....	+15	28	7.5	
(f) Groombridge 1850 ..		48.8	53.2	-0.1	329	32	50.8	.....	.....	.....	.....	-0 35.1	.....	.....	+86	28	41.3	
(f) Groombridge 1884 ..		8.3	14.0	-0.1	327	26	11.1	.....	35.0	29.60	36.4	-0 38.0	.....	.....	+88	35	23.9	
Jupiter South L.....		8.6	11.0	+0.1	60	46	9.9	- 0.1	.....	.....	.....	+1 45.9	.....	.....	- 4	46	58.7	
(n) α Ursæ Minoris S. P.		52.9	58.2	0.0	324	28	25.5	- 0.4	.....	.....	.....	-0 42.6	56.7	.....	+88	27	15.5	
Pallas.....		43.5	46.0	+0.1	46	11	44.9	- 0.1	34.7	29.61	36.2	+1 2.0	.....	.....	+ 9	48	10.2	
Mar. 19	(o) Sun South L.....	38.5	41.0	+0.1	56	57	46.3	- 0.2	.....	.....	.....	+1 29.8	.....	57.1	- 0	58	18.8	
	(p) Sun North L.....	37.4	41.1	+0.1	56	25	39.4	+ 0.1	.....	.....	.....	+1 28.0	.....	.....	- 0	26	10.4	
	α Andromedæ.....	20.9	25.1	-0.1	27	48	22.9	- 0.1	42.3	29.64	42.0	+0 30.9	57.1	.....	+28	12	3.4	
	Mercury Centre.....	24.9	27.4	+0.1	54	59	26.2	- 0.1	.....	.....	.....	+1 23.5	.....	.....	+ 1	0	7.5	
	α Cassiopeæ.....	38.7	42.0	-0.5	0	21	39.9	0.0	.....	.....	.....	+0 0.3	56.6	.....	+55	39	16.9	
(a) At 9 <sup>h</sup> 31 <sup>m</sup> 5 <sup>s</sup> .		(e) At Wire IV.		(i) 20 <sup>s</sup> after transit.		(n) At 13 <sup>h</sup> 4 <sup>m</sup> 35 <sup>s</sup> .												
(b) At 11 <sup>h</sup> 29 <sup>m</sup> 0 <sup>s</sup> .		(f) On meridian.		(k) 18 <sup>s</sup> after transit.		(o) At 23 <sup>h</sup> 53 <sup>m</sup> 42 <sup>s</sup> .												
(c) 6 <sup>s</sup> before transit.		(g) 48 <sup>s</sup> after transit.		(l) At Wire V.		(p) At 23 <sup>h</sup> 54 <sup>m</sup> 50 <sup>s</sup> .												
(d) At 8 <sup>h</sup> 10 <sup>m</sup> 45 <sup>s</sup> .		(h) At 11 <sup>h</sup> 25 <sup>m</sup> 24 <sup>s</sup> .		(m) 40 <sup>s</sup> after transit.														



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Mar. 19	(a) $\alpha$ Ursæ Minoris .....	16.1	21.5	-0.1	327 34 18.7	+ 0.7	42.8	In.	42.8	-0 37.3	57.7	57.1	+ 88 27 15.0
	(b) Venus Centre .....	54.2	58.7	+0.1	48 45 56.6	+ 0.5	.....	.....	.....	+1 6.6	.....	.....	+ 7 13 53.4
Mar. 21	(c) Moon South L. ....	29.5	.....	-0.1	28 5 31.4	+ 0.2	.....	.....	.....	+0 30.6	.....	56.8	+27 54 54.6
	(d) .....	28.1	32.0	-0.1	28 5 30.0	+ 1.2	41.8	28.98	42.5	+0 30.6	.....	.....	+27 54 55.0
	136 Tauri .....	11.5	16.2	-0.1	28 26 13.8	- 0.1	.....	.....	.....	+0 31.0	.....	.....	+27 34 12.1
	$\alpha$ Orionis .....	30.7	33.3	+0.1	48 37 32.2	- 0.1	.....	.....	.....	+1 5.1	55.8	.....	+ 7 22 19.6
	$\kappa$ Aurigæ .....	15.0	18.5	-0.2	26 27 16.6	- 0.1	.....	.....	.....	+0 28.6	.....	.....	+29 33 11.7
	$\mu$ Geminorum .....	47.3	50.7	-0.1	33 24 48.9	- 0.1	.....	.....	.....	+0 37.9	58.2	.....	+22 35 30.1
	(c) $\delta$ Ursæ Minoris S. P. ....	43.0	47.7	+0.1	322 36 45.5	- 7.2	40.8	28.99	41.6	-0 44.1	54.8	.....	+86 34 57.4
	(f) Groombridge 1418 ...	3.2	8.5	-0.1	330 25 5.8	+ 0.1	37.8	29.00	39.2	-0 33.0	.....	.....	+85 36 23.9
	$\epsilon$ Ursæ Majoris .....	50.5	55.0	-0.6	354 45 52.2	0.0	.....	.....	.....	-0 5.4	.....	.....	+61 15 10.0
	(b) 12 Hydræ .....	21.2	24.4	+0.1	68 56 22.9	- 0.7	.....	.....	.....	+2 29.3	.....	.....	-12 57 54.7
	(7) Groomb. 3402 S. P. ....	50.8	55.0	0.0	324 38 52.9	- 0.1	.....	.....	.....	-0 41.6	.....	.....	+88 37 14.4
	$\epsilon$ Ursæ Majoris .....	32.2	37.0	-0.5	7 20 34.1	- 0.1	.....	.....	.....	+0 7.4	.....	.....	+48 40 15.4
	A. S. C. 1103 .....	6.9	10.0	-0.3	16 55 8.2	- 0.1	.....	.....	.....	+0 17.6	.....	.....	+39 5 31.1
	A. S. C. 1117 .....	44.8	48.7	-0.1	34 3 46.6	- 0.1	36.4	29.02	37.9	+0 39.3	.....	.....	+21 56 31.0
	A. S. C. 1135 .....	31.4	34.6	-0.2	333 59 32.8	0.0	.....	.....	.....	-0 28.5	.....	.....	+82 1 52.5
	33 Hydræ .....	16.5	19.9	+0.1	61 11 18.3	- 0.1	.....	.....	.....	+1 45.2	.....	.....	- 5 12 6.6
	(h) Groomb. 3548 S. P. ....	54.8	59.2	+0.1	322 22 57.0	.....	.....	.....	.....	-0 45.0	.....	.....	+86 21 15.2
	$\phi$ Ursæ Majoris .....	3.3	7.9	-0.5	1 12 5.2	0.0	.....	.....	.....	+0 1.2	.....	.....	+54 48 50.4
	(i) A. S. C. 1199 .....	3.7	7.0	+0.1	68 30 5.5	- 0.7	.....	.....	.....	+2 26.4	.....	.....	-12 31 34.4
	17 Sextantis .....	20.6	22.1	+0.1	63 36 21.5	- 0.1	.....	.....	.....	+1 56.6	.....	.....	- 7 37 21.2
	(h) Groombridge 1620 *	33.2	37.1	-0.1	330 57 35.1	.....	36.1	29.01	37.8	-0 32.4	.....	.....	+85 3 54.1
	30 Leonis Minoris .....	47.1	49.8	-0.3	21 23 48.1	- 0.1	.....	.....	.....	+0 22.8	.....	.....	+34 36 46.0
	1 Hydræ & Crateris .....	59.7	61.0	+0.1	71 29 0.4	- 0.1	.....	.....	.....	+2 51.8	.....	.....	-15 30 55.3
	$\sigma$ Leonis .....	20.8	24.9	+0.1	49 5 23.0	- 0.1	35.0	29.00	36.7	+1 7.1	.....	.....	+ 6 54.26.8
	(k) Mars North L. ....	7.4	11.0	+0.1	47 36 9.3	+ 0.3	.....	.....	.....	+1 3.7	.....	.....	+ 8 23 43.5
	(l) Mars South L. ....	24.5	27.8	+0.1	47 36 26.3	- 0.2	.....	.....	.....	+1 3.7	.....	.....	+ 8 23 27.0
	(m) * R. A. 11 <sup>h</sup> 21 <sup>m</sup> 13 <sup>s</sup>	50.8	54.0	+0.1	47 30 52.5	- 0.3	.....	.....	.....	+1 3.5	.....	.....	+ 8 29 1.1
	$\beta$ Leonis .....	59.8	62.1	0.0	40 32 1.0	- 0.1	.....	.....	.....	+0 49.8	57.9	.....	+15 28 6.1
	(h) Groombridge 1850 ..	47.8	52.0	-0.1	329 32 49.7	.....	.....	.....	.....	-0 34.4	.....	.....	+86 28 41.5
	(h) Groombridge 1884 ..	7.7	13.0	-0.1	327 26 10.3	.....	.....	.....	.....	-0 37.4	.....	.....	+88 35 23.9
	(h) Groomb. 144 S. P. ....	8.7	13.1	0.0	324 11 10.9	.....	34.2	28.99	35.9	-0 42.2	.....	.....	+88 9 31.9
	(h) A. S. C. 91 S. P. ....	13.4	18.3	+0.1	321 25 16.0	.....	.....	.....	.....	-0 46.7	.....	.....	+85 23 32.5
	(h) Groomb. 195 S. P. ....	52.5	56.1	+0.1	322 18 54.4	.....	.....	.....	.....	-0 45.2	.....	.....	+86 17 12.4
	(n) Jupiter South L. ....	46.0	49.2	+0.1	60 37 47.6	+ 0.1	.....	.....	.....	+1 43.1	.....	.....	- 4 38 34.0
	(o) Jupiter North L. ....	5.0	8.9	+0.1	60 37 7.1	- 0.6	.....	.....	.....	+1 43.1	.....	.....	- 4 37 52.8
	(p) $\alpha$ Ursæ Minoris S. P. ....	52.8	57.2	0.0	324 28 55.0	- 0.9	.....	.....	.....	-0 41.8	57.5	.....	+ 88 27 15.5
Pallas .....	17.0	20.8	+0.1	45 6 19.0	- 0.1	.....	.....	.....	+0 58.4	.....	.....	+10 53 39.5	
(h) Groombridge 2007 ..	57.9	62.0	-0.1	330 25 59.9	.....	.....	.....	.....	-0 33.2	.....	.....	+85 35 30.1	
Ceres .....	50.8	54.0	+0.1	49 15 52.5	- 0.1	35.0	28.98	36.4	+1 7.5	.....	.....	+ 6 43 56.9	
Mar. 22	(b) Sun South L. ....	42.6	45.0	+0.1	55 46 43.9	+ 0.2	40.0	29.01	40.0	+1 24.5	.....	57.1	+ 0 12 48.5
	(q) $\alpha$ Ursæ Minoris .....	47.7	52.8	-0.1	327 32 50.6	+88.3	.....	.....	.....	-0 36.7	57.0	.....	+88 27 14.9
	(r) .....	0.7	6.5	-0.1	327 34 3.1	+15.4	.....	.....	.....	-0 36.7	.....	.....	+88 27 15.3
	(h) .....	17.2	22.2	-0.1	327 34 19.6	.....	.....	.....	.....	-0 36.7	.....	.....	+88 27 14.2
	(s) .....	56.0	62.0	-0.1	327 33 58.9	+20.2	.....	.....	.....	-0 36.7	.....	.....	+88 27 14.7
	(k) Venus South L. ....	41.7	.....	+0.1	47 16 43.3	- 0.2	.....	.....	.....	+1 2.2	.....	.....	+ 8 43 11.8
	(l) Venus North L. ....	31.0	34.0	+0.1	47 16 32.6	+ 0.2	41.1	29.02	40.3	+1 2.2	.....	.....	+ 8 43 22.1
	$\alpha$ Arietis .....	20.9	24.8	-0.1	33 18 22.7	- 0.1	.....	.....	.....	+0 37.8	57.4	.....	+22 41 56.7
	$\alpha$ Persei .....	38.5	42.2	-0.5	6 43 39.8	- 0.1	41.0	29.02	40.9	+0 6.7	56.7	.....	+49 17 10.7
	$\eta$ Tauri .....	3.3	8.5	-0.1	32 24 5.8	- 0.1	41.5	.....	.....	+0 36.5	57.4	.....	+23 36 14.9
	(t) Moon North L. ....	14.2	19.5	-0.1	27 51 16.8	- 2.0	40.1	29.04	40.6	+0 30.5	.....	.....	+28 9 11.8
Mar. 23	Mercury Centre .....	23.0	27.0	+0.1	51 11 25.1	- 0.1	47.0	28.98	46.5	+1 10.4	.....	57.0	+ 4 48 21.6
(a) At 1 <sup>h</sup> 5 <sup>m</sup> 33 <sup>s</sup> .		(e) At 6 <sup>h</sup> 17 <sup>m</sup> 27 <sup>s</sup> .		(i) 40° after transit.		(n) At Wire II.		(r) At 0 <sup>h</sup> 44 <sup>m</sup> 58 <sup>s</sup> .					
(b) At Wire V.		(f) At 8 <sup>h</sup> 8 <sup>m</sup> 40 <sup>s</sup> .		(k) At Wire I.		(o) 50° after transit.		(s) At 1 <sup>h</sup> 21 <sup>m</sup> 35 <sup>s</sup> .					
(c) At 5 <sup>h</sup> 35 <sup>m</sup> 36 <sup>s</sup> .		(g) At 8 <sup>h</sup> 43 <sup>m</sup> 52 <sup>s</sup> .		(l) At Wire IV.		(p) At 13 <sup>h</sup> 6 <sup>m</sup> 5 <sup>s</sup> .		(t) At 6 <sup>h</sup> 38 <sup>m</sup> 45 <sup>s</sup> .					
(d) At 5 <sup>h</sup> 36 <sup>m</sup> 14 <sup>s</sup> .		(h) On meridian.		(m) 30° after transit.		(q) At 0 <sup>h</sup> 21 <sup>m</sup> 10 <sup>s</sup> .							



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.		
		I.	II.		observed.	adopted.	°						'	"			
Mar. 23	(a) $\alpha$ Ursæ Minoris .....	8.0	14.0	-0.1	327	34	10.9	+ 7.4	.....	.....	.....	-0 36.2	56.8	57.0	+ 88	27	14.9
	(b) .....	12.0	17.2	-0.1	327	34	14.5	+ 4.4	.....	.....	.....	-0 36.2	.....	.....	+ 88	27	14.3
	(c) .....	32.1	37.7	-0.1	327	33	34.8	+ 43.7	.....	.....	.....	-0 36.2	.....	.....	+ 88	27	14.7
	(d) Venus North L. ....	5.6	....	+0.1	46	47	8.8	- 0.2	.....	.....	.....	+0 59.9	.....	.....	+ 9	12	48.5
	(e) Venus South L. ....	13.5	19.5	+0.1	46	47	16.7	+ 0.2	47.6	28.99	47.5	+0 59.9	.....	.....	+ 9	12	40.2
	$\alpha$ Geminorum follow. ....	15.5	21.6	-0.2	23	46	18.4	- 0.1	39.0	29.03	40.9	+0 25.4	57.0	.....	+ 32	14	13.3
	$\alpha$ Canis Minoris .....	49.4	55.0	+0.1	50	21	52.4	- 0.1	.....	.....	.....	+1 9.7	58.4	.....	+ 5	37	55.0
	26 Monocerotis.....	45.0	48.1	+0.1	65	9	46.6	- 0.1	.....	.....	.....	+2 4.1	.....	.....	- 9	10	53.6
	(f) Moon North L. ....	48.8	53.6	-0.1	29	53	51.1	- 4.6	.....	.....	.....	+0 33.2	.....	.....	+ 26	6	37.3
	(g) 6 Argûs.....	21.0	24.8	+0.1	72	47	23.1	- 1.9	.....	.....	.....	+3 4.2	.....	.....	- 16	49	28.4
	6 Caneri .....	53.5	59.5	-0.1	27	45	56.4	- 0.1	.....	.....	.....	+0 30.4	.....	.....	+ 28	14	30.3
	16 Argûs .....	14.5	17.5	+0.1	74	44	16.1	- 0.1	39.0	29.02	40.6	+3 28.2	.....	.....	- 18	46	47.2
	(h) Groombridge 1418....	3.9	9.0	-0.1	330	25	6.4	.....	.....	.....	.....	-0 32.9	.....	.....	+ 85	36	23.5
	$\alpha$ Ursæ Majoris .....	50.2	54.9	-0.6	354	45	52.0	- 0.0	.....	.....	.....	-0 5.4	.....	.....	+ 61	15	10.4
	$\theta$ Caneri .....	8.2	12.4	0.0	37	22	10.4	- 0.1	.....	.....	.....	+0 44.1	.....	.....	+ 18	38	2.6
	$\pi^2$ Ursæ Majoris .....	52.6	56.1	-0.5	351	7	53.8	- 0.0	.....	.....	.....	-0 9.1	.....	.....	+ 64	53	12.3
	(i) * R. A. 8 <sup>h</sup> 28 <sup>m</sup> 20 <sup>s</sup> ....	52.9	56.9	0.0	35	42	54.8	- 0.2	.....	.....	.....	+0 41.5	.....	.....	+ 20	17	20.9
	12 Hydræ .....	20.5	24.0	+0.1	68	56	22.4	- 0.1	.....	.....	.....	+2 28.8	.....	.....	- 12	57	54.1
	(k) Groomb. 3402 S. P. ....	50.0	55.0	0.0	324	38	52.5	- 0.5	.....	.....	.....	-0 41.2	.....	.....	+ 88	37	13.8
	(l) A. S. C. 1103.....	5.0	10.0	-0.3	16	55	7.2	- 0.0	.....	.....	.....	+0 17.5	.....	.....	+ 39	5	32.3
	A. S. C. 1117.....	43.9	48.8	-0.1	34	3	46.2	- 0.1	38.7	29.02	39.9	+0 39.1	.....	.....	+ 21	56	31.8
	A. S. C. 1135.....	29.9	33.9	-0.2	333	59	31.7	- 0.0	.....	.....	.....	-0 28.3	.....	.....	+ 82	1	53.6
	$\alpha$ Hydræ .....	55.2	58.7	+0.1	63	56	57.1	- 0.1	.....	.....	.....	+1 57.7	56.0	.....	- 7	57	57.7
	33 Hydræ .....	15.2	18.9	+0.1	61	11	17.2	- 0.1	.....	.....	.....	+1 44.8	.....	.....	- 5	12	4.9
	$\phi$ Ursæ Majoris .....	2.0	7.3	-0.5	1	12	4.2	- 0.0	.....	.....	.....	+0 1.2	.....	.....	+ 54	48	51.6
	(h) Groombridge 1620 *	31.2	35.8	-0.1	330	57	33.5	.....	.....	.....	.....	-0 32.3	.....	.....	+ 85	3	55.8
	30 Leonis Minoris.....	46.3	49.1	-0.3	21	23	47.4	- 0.1	37.7	29.03	38.8	+0 22.7	.....	.....	+ 34	36	47.0
	1 Hydræ & Crateris....	1.0	3.5	+0.1	71	29	2.3	- 0.1	.....	.....	.....	+2 51.2	.....	.....	- 15	30	56.4
	42 Leonis Minoris ....	51.9	55.0	-0.2	24	28	53.2	- 0.1	.....	.....	.....	+0 26.4	.....	.....	+ 31	31	37.5
	67 Leonis.....	43.9	48.0	-0.1	30	28	45.8	- 0.1	36.9	29.04	38.2	+0 34.2	.....	.....	+ 25	31	37.1
	(m) Mars South L. ....	4.4	7.4	+0.1	47	23	5.9	+ 0.3	.....	.....	.....	+1 3.1	.....	.....	+ 8	36	47.7
	(l) Mars North L. ....	48.9	52.1	+0.1	47	22	50.5	- 0.2	.....	.....	.....	+1 3.1	.....	.....	+ 8	37	3.6
	$\beta$ Leonis .....	58.0	62.9	0.0	40	32	0.5	- 0.1	.....	.....	.....	+0 49.7	57.4	.....	+ 15	28	6.9
	(n) Groombridge 1884 ...	4.2	11.0	-0.1	327	26	7.5	- 0.6	35.8	29.06	37.3	-0 37.4	.....	.....	+ 83	35	27.5
	(h) Groomb. 144 S. P. ....	8.0	13.1	0.0	324	11	10.6	.....	.....	.....	.....	-0 42.2	.....	.....	+ 88	9	31.4
	(h) A. S. C. 91 S. P. ....	12.1	17.5	+0.1	321	25	14.9	.....	.....	.....	.....	-0 46.6	.....	.....	+ 85	23	31.3
	(o) $\alpha$ Ursæ Minoris S. P. ..	51.1	56.9	0.0	324	28	54.0	- 1.4	35.9	29.05	36.8	-0 41.7	56.7	.....	+ 88	27	13.9
Mar. 24	(p) Moon North L.....	6.0	....	-0.1	33	21	7.3	+ 11.9	.....	.....	.....	+0 38.0	.....	55.9	+ 22	38	58.7
	(q) .....	15.8	....	-0.1	33	21	17.1	+ 2.1	.....	.....	.....	+0 38.0	.....	.....	+ 22	38	58.7
	(r) .....	22.1	....	-0.1	33	21	23.4	- 5.0	.....	.....	.....	+0 38.0	.....	.....	+ 22	38	59.5
	(s) .....	29.3	32.1	-0.1	33	21	30.6	- 12.6	37.1	28.97	38.5	+0 38.0	.....	.....	+ 22	38	59.9
	(h) Groomb. 3402 S. P. ....	49.7	53.0	0.0	324	38	51.3	.....	.....	.....	-0 41.3	.....	.....	+ 88	37	14.1	
	$\iota$ Ursæ Majoris .....	30.9	35.5	-0.5	7	20	32.7	- 0.1	.....	.....	.....	+0 7.4	.....	.....	+ 48	40	15.9
	(t) Groomb. 3402 S. P. ....	54.5	59.0	0.0	324	38	56.7	- 4.6	.....	.....	.....	-0 41.3	.....	.....	+ 88	37	14.9
	$\xi$ Caneri .....	42.9	46.8	-0.1	33	18	44.7	- 0.1	.....	.....	.....	+0 38.1	.....	.....	+ 22	41	33.2
	(u) 83 Cancri.....	10.2	13.5	0.0	37	37	11.9	- 0.2	.....	.....	.....	+0 44.6	.....	.....	+ 18	22	59.6
	$\alpha$ Hydræ .....	55.1	58.1	+0.1	63	56	56.8	- 0.1	.....	.....	.....	+1 58.0	55.9	.....	.....	.....	.....
$\theta$ Ursæ Majoris.....	20.1	24.2	-0.5	3	36	21.7	- 0.0	36.8	28.97	38.0	+0 3.6	.....	.....	+ 52	24	30.6	
Mar. 25	Sun South L. ....	53.0	57.2	+0.1	54	35	55.2	- 0.1	39.3	29.07	40.0	+1 21.2	.....	56.9	+ 1	23	40.6
	(x) $\alpha$ Ursæ Minoris ....	17.0	22.1	-0.1	327	33	19.4	+ 59.7	.....	.....	.....	-0 36.8	55.9	.....	+ 88	27	14.6
	$\alpha$ Cassiopeæ.....	40.8	43.9	-0.5	0	21	41.9	- 0.0	.....	.....	.....	+0 0.3	57.2	.....	+ 55	39	14.7
	(h) $\alpha$ Ursæ Minoris .....	16.8	21.9	-0.1	327	34	19.2	.....	.....	.....	-0 36.8	.....	.....	+ 88	27	14.5	
	(y) .....	22.7	27.2	-0.1	327	33	24.8	+ 53.7	41.2	29.09	41.0	-0 36.8	.....	.....	+ 88	27	15.2
	(m) Venus South L. ....	5.8	....	+0.1	45	49	7.5	- 0.2	.....	.....	.....	+0 59.2	.....	.....	+ 10	10	50.4
(a) At 0 <sup>h</sup> 49 <sup>m</sup> 15 <sup>s</sup> .		(f) At 7 <sup>h</sup> 39 <sup>m</sup> 7 <sup>s</sup> .		(l) 36 <sup>s</sup> after transit.		(p) At 8 <sup>h</sup> 33 <sup>m</sup> 31 <sup>s</sup> .		(t) At 8 <sup>h</sup> 54 <sup>m</sup> 30 <sup>s</sup> .									
(b) At 1 <sup>h</sup> 10 <sup>m</sup> 10 <sup>s</sup> .		(g) At 7 <sup>h</sup> 43 <sup>m</sup> 48 <sup>s</sup> .		(m) At Wire I.		(q) At 8 <sup>h</sup> 34 <sup>m</sup> 24 <sup>s</sup> .		(u) 18 <sup>s</sup> after transit.									
(c) At 1 <sup>h</sup> 29 <sup>m</sup> 50 <sup>s</sup> .		(h) On meridian.		(n) At 12 <sup>h</sup> 19 <sup>m</sup> 30 <sup>s</sup> .		(r) At 8 <sup>h</sup> 35 <sup>m</sup> 6 <sup>s</sup> .		(x) At 0 <sup>h</sup> 27 <sup>m</sup> 30 <sup>s</sup> .									
(d) 24 <sup>s</sup> before transit.		(i) At Wire V.		(o) At 13 <sup>h</sup> 6 <sup>m</sup> 10 <sup>s</sup> .		(s) At 8 <sup>h</sup> 35 <sup>m</sup> 56 <sup>s</sup> .		(y) At 1 <sup>h</sup> 33 <sup>m</sup> 0 <sup>s</sup> .									
(e) 20 <sup>s</sup> after transit.		(k) At 8 <sup>h</sup> 47 <sup>m</sup> 45 <sup>s</sup> .															



Date.	OBJECT OBSERVED,	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Mar. 25	(a) Venus North L. ....	56.7	60.0	+0.1	45 48 58.4	- 0.1	.....	In.	.....	+0 59.2	.....	56.9	+10 10 59.4
	α Arietis.....	20.9	24.1	-0.1	33 18 22.4	- 0.1	.....	.....	.....	+0 37.9	57.0	.....	+22 41 56.7
	(b) Groombridge 1418 ...	1.4	6.0	-0.1	330 25 3.6	+ 3.4	.....	.....	.....	-0 33.3	.....	.....	+85 36 23.2
	1 Hydræ.....	24.9	27.0	+0.1	59 13 26.0	- 0.1	38.1	29.24	39.9	+1 37.6	.....	.....	- 3 14 6.6
	(c) π <sup>2</sup> Ursæ Majoris.....	50.6	54.3	-0.5	351 7 51.9	+ 2.0	.....	.....	.....	-0 9.2	.....	.....	+64 53 12.2
	(d) ε Hydræ.....	33.2	37.0	+0.1	48 59 35.2	+ 0.2	.....	.....	.....	+1 7.1	.....	.....	+ 7 0 14.4
	(e) 12 Hydræ.....	20.0	23.3	+0.1	68 56 21.8	- 1.3	.....	.....	.....	+2 30.4	.....	.....	-12 57 54.0
	(f) ω Hydræ.....	55.7	60.0	+0.1	50 15 58.0	- 0.3	.....	.....	.....	+1 10.3	.....	.....	+ 5 43 48.9
	(g) ξ Cancrī.....	43.9	47.9	-0.1	33 18 45.8	- 0.1	.....	.....	.....	+0 38.4	.....	.....	+22 41 32.8
	18 Ursæ Majoris.....	50.8	55.0	-0.5	1 19 52.4	0.0	36.7	29.25	38.7	+0 1.3	.....	.....	+54 41 3.2
	83 Cancrī.....	9.6	13.5	0.0	37 37 11.6	- 0.1	.....	.....	.....	+0 45.1	.....	.....	+18 23 0.3
	27 Hydræ.....	34.5	36.8	+0.1	64 51 35.8	- 0.1	.....	.....	.....	+2 4.0	.....	.....	- 8 52 42.8
	(h) Moon North L. ....	5.0	.....	0.0	37 52 6.8	+12.1	.....	.....	.....	+0 45.5	.....	.....	+18 7 52.5
	(i) .....	18.2	.....	0.0	37 52 20.0	- 0.4	.....	.....	.....	+0 45.5	.....	.....	+18 7 51.8
	(k) .....	27.5	31.0	0.0	37 52 29.3	-10.6	.....	.....	.....	+0 45.5	.....	.....	+18 7 52.7
	22 Leonis.....	9.6	13.0	-0.1	30 51 11.2	- 0.1	.....	.....	.....	+0 34.9	.....	.....	+25 9 10.9
	γ Leonis..... *	30.0	33.8	0.0	42 47 32.0	- 0.1	.....	.....	.....	+0 54.2	.....	.....	+13 12 30.8
	(m) υ <sup>2</sup> Hydræ.....	50.7	55.4	+0.1	68 15 53.2	- 0.4	.....	.....	.....	+2 25.7	.....	.....	-12 17 21.6
	(n) η Leonis..... *	31.7	35.2	0.0	38 27 33.5	- 0.2	.....	.....	.....	+0 46.5	.....	.....	+17 32 37.1
	17 Sextantis.....	20.1	22.0	+0.1	63 36 21.2	- 0.1	36.8	29.27	38.4	+1 57.4	.....	.....	- 7 37 21.6
	30 Leonis Minoris ...	45.1	48.6	-0.3	21 23 46.5	- 0.1	.....	.....	.....	+0 22.9	.....	.....	+34 36 47.6
	1 Hydræ & Crateris..	59.0	61.4	+0.1	71 29 0.3	- 0.1	.....	.....	.....	+2 53.1	.....	.....	-15 30 56.4
	3 Hydræ & Crateris..	2.9	5.2	+0.1	72 25 4.2	- 0.1	.....	.....	.....	+3 2.8	.....	.....	-16 27 10.0
	α Hydræ & Crateris..	27.4	30.1	+0.1	73 24 28.8	- 0.1	.....	.....	.....	+3 14.2	.....	.....	-17 26 46.0
	χ Leonis.....	43.0	45.2	+0.1	47 47 44.1	- 0.1	.....	.....	.....	+1 4.6	.....	.....	+ 8 12 8.3
	↓ Ursæ Majoris.....	32.8	36.2	-0.4	10 38 34.1	- 0.1	35.9	29.29	37.7	+0 11.0	.....	.....	+45 22 11.9
	(o) Mars North L. ....	30.0	33.0	+0.1	47 10 31.6	+ 0.3	.....	.....	.....	+1 3.3	.....	.....	+ 8 49 21.7
	(f) Mars South L. ....	45.0	48.0	+0.1	47 10 46.6	- 0.2	.....	.....	.....	+1 3.3	.....	.....	+ 8 49 7.2
	* R. A. 11 <sup>h</sup> 17 <sup>m</sup> 6 <sup>s</sup> ..	39.4	43.4	+0.1	47 9 41.5	- 0.1	.....	.....	.....	+1 3.3	.....	.....	+ 8 50 12.2
	β Leonis.....	58.5	61.2	0.0	40 31 59.9	- 0.1	.....	.....	.....	+0 50.3	57.5	.....	+15 28 6.8
	(p) Groombridge 1850 ...	46.6	51.2	-0.1	329 32 48.7	.....	.....	.....	.....	-0 34.7	.....	.....	+86 28 42.9
	(p) Groombridge 1884 ...	5.8	11.9	-0.1	327 26 8.8	.....	35.0	29.32	37.2	-0 37.8	.....	.....	+88 35 25.9
	(q) α Ursæ Minoris S. P.	39.9	44.4	0.0	324 29 42.1	-50.0	.....	.....	.....	-0 42.2	56.8	.....	+88 27 13.0
	(p) Groomb. 144 S. P. ...	7.2	12.0	0.0	324 11 9.6	.....	.....	.....	.....	-0 42.7	.....	.....	+88 9 30.0
	(p) A. S. C. 91 S. P. ....	12.0	18.1	+0.1	321 25 15.2	.....	.....	.....	.....	-0 47.2	.....	.....	+85 23 31.1
	(r) Groomb. 195 S. P. ....	50.9	55.5	+0.1	322 18 53.3	- 0.1	.....	.....	.....	-0 45.7	.....	.....	+86 17 10.6
	(o) Jupiter North L. ....	29.1	31.7	+0.1	60 25 30.5	+ 0.3	.....	.....	.....	+1 43.5	.....	.....	- 4 26 17.4
	(n) Jupiter South L. ....	11.5	14.0	+0.1	60 26 12.9	- 0.5	.....	.....	.....	+1 43.5	.....	.....	- 4 26 59.0
	(s) α Ursæ Minoris S. P.	50.7	55.5	0.0	324 28 53.1	- 0.1	.....	.....	.....	-0 42.2	.....	.....	+88 27 13.9
	Pallas.....	48.6	51.5	0.0	43 40 50.1	- 0.1	.....	.....	.....	+0 56.2	.....	.....	+12 19 10.7
	(p) Groombridge 2007 ...	55.9	60.9	-0.1	330 25 58.3	.....	.....	.....	.....	-0 33.6	.....	.....	+85 35 32.2
	(t) α Ursæ Minoris S. P.	33.8	37.9	0.0	324 29 35.8	-43.1	35.0	29.34	36.6	-0 42.2	.....	.....	+88 27 13.6
	Ceres.....	11.1	14.9	+0.1	48 56 13.1	- 0.1	.....	.....	.....	+1 7.5	.....	.....	+ 7 3 36.4
Mar. 26	(u) Sun North L. ....	18.6	23.1	+0.1	53 40 20.9	- 0.1	.....	.....	.....	+1 19.5	.....	56.6	+ 2 19 16.3
	(v) Sun South L. ....	19.2	22.2	+0.1	54 12 20.7	+ 0.3	39.6	29.48	39.8	+1 21.1	.....	.....	+ 1 47 14.5
	(w) Venus Centre.....	16.6	20.5	+0.1	45 20 18.6	- 0.1	44.0	29.47	41.6	+0 58.7	.....	.....	+10 39 39.4
Mar. 28	(x) α Ursæ Minoris.....	11.5	16.7	-0.1	327 33 14.1	+67.1	.....	.....	.....	-0 37.3	56.5	56.4	+88 27 12.5
Mar. 29	(y) α Persei.....	37.2	41.0	-0.5	6 43 38.6	+ 1.0	38.5	29.32	39.4	+0 6.8	55.6	.....	+49 17 10.0
	α Hydræ.....	53.2	55.0	+0.1	63 56 54.1	- 0.1	.....	.....	.....	+2 1.0	55.9	.....	- 7 57 58.6
	θ Ursæ Majoris.....	18.0	23.7	-0.5	3 36 20.3	0.0	.....	.....	.....	+0 3.7	.....	.....	+52 24 32.4
	33 Hydræ.....	14.5	17.2	+0.1	61 11 15.9	- 0.1	32.2	29.42	37.0	+1 47.6	.....	.....	- 5 12 7.0
	22 Leonis.....	7.0	10.7	-0.1	30 51 8.7	- 0.1	.....	.....	.....	+0 35.5	.....	.....	+25 9 12.3
	(z) υ <sup>2</sup> Hydræ.....	45.8	50.9	+0.1	68 15 48.4	- 1.1	.....	.....	.....	+2 28.0	.....	.....	-12 17 18.9
(a) At Wire III.		(f) 30' after transit.		(m) At Wire IV.		(r) At 12 <sup>h</sup> 51 <sup>m</sup> 15 <sup>s</sup> .		(w) Hazy					
(b) At 8 <sup>h</sup> 13 <sup>m</sup> 20 <sup>s</sup> .		(g) 18' after transit.		(n) At Wire V.		(s) At 13 <sup>h</sup> 2 <sup>m</sup> 33 <sup>s</sup> .		(x) At 0 <sup>h</sup> 25 <sup>m</sup> 30 <sup>s</sup> .					
(c) At 8 <sup>h</sup> 28 <sup>m</sup> 0 <sup>s</sup> .		(h) At 9 <sup>h</sup> 25 <sup>m</sup> 28 <sup>s</sup> .		(o) At Wire I.		(t) At 13 <sup>h</sup> 29 <sup>m</sup> 40 <sup>s</sup> .		(y) 1 <sup>m</sup> 18 <sup>s</sup> after transit.					
(d) At Wire II.		(i) At 9 <sup>h</sup> 26 <sup>m</sup> 26 <sup>s</sup> .		(p) On meridian.		(u) At 0 <sup>h</sup> 18 <sup>m</sup> 25 <sup>s</sup> .		(z) 1 <sup>m</sup> after transit.					
(e) 1 <sup>m</sup> 6 <sup>s</sup> after transit.		(k) At 9 <sup>h</sup> 27 <sup>m</sup> 17 <sup>s</sup> .		(q) At 12 <sup>h</sup> 30 <sup>m</sup> 20 <sup>s</sup> .		(v) At 0 <sup>h</sup> 20 <sup>m</sup> 10 <sup>s</sup> .							



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduction to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Mar. 29	$\lambda^2$ Hydræ.....	21.7	26.1	+0.1	67 32 23.9	- 0.1	31.9	29.42	36.6	+2 22.9	.....	56.4	-11 33 50.3
	$\mu$ Hydræ .....	5.2	8.0	+0.1	71 59 6.7	- 0.1	.....	.....	.....	+3 0.8	.....	.....	-16 1 11.0
	37 Leonis Minoris....	54.0	59.0	-0.2	23 11 56.2	- 0.1	.....	.....	.....	+0 25.5	.....	.....	+32 48 34.8
	3 Hydræ & Crateris..	1.5	3.9	+0.1	72 25 2.8	- 0.1	.....	.....	.....	+3 5.4	.....	.....	-16 27 11.7
	$\beta$ Ursæ Majoris .....	18.6	22.1	-0.6	358 46 19.7	0.0	.....	.....	.....	-0 1.3	.....	.....	+57 14 38.0
	$\gamma$ Leonis.....	41.4	43.5	+0.1	47 47 42.6	- 0.1	.....	.....	.....	+1 5.5	.....	.....	+ 8 12 8.4
	$\downarrow$ Ursæ Majoris .....	32.5	35.9	-0.4	10 38 33.8	- 0.1	31.9	29.43	35.5	+0 11.1	.....	.....	+45 22 11.6
	(a) Mars South L. ....	19.5	22.6	+0.1	46 49 21.2	+ 0.3	.....	.....	.....	+1 3.3	.....	.....	+ 9 10 31.6
	(b) Mars North L.....	4.0	8.0	+0.1	46 49 6.1	- 0.2	.....	.....	.....	+1 3.3	.....	.....	+ 9 10 47.2
	$\beta$ Leonis.....	56.5	59.9	0.0	40 31 58.1	- 0.1	.....	.....	.....	+0 50.9	56.5	.....	+15 28 7.5
	(c) Groombridge 1850....	45.8	50.7	-0.1	329 32 48.2	+ 0.8	.....	.....	.....	-0 35.2	.....	.....	+86 28 42.6
	$\phi$ Virginis.....	28.2	31.5	+0.1	46 22 29.9	- 0.1	.....	.....	.....	+1 2.4	.....	.....	+ 9 37 24.2
	$\eta$ Virginis.....	59.4	62.2	+0.1	55 46 0.9	- 0.1	.....	.....	.....	+1 27.3	.....	.....	+ 0 13 28.3
	(d) Groombridge 1884 ..	5.0	10.5	-0.1	327 26 7.6	- 0.1	31.5	29.43	35.0	-0 38.2	.....	.....	+88 35 27.1
	(e) Moon South L.....	35.7	38.2	+0.1	61 7 37.1	+ 6.4	.....	.....	.....	+1 47.6	.....	.....	- 5 8 34.7
	(f) .....	57.5	60.2	+0.1	61 7 59.0	-15.0	.....	.....	.....	+1 47.6	.....	.....	- 5 8 35.2
	(g) $\alpha$ Ursæ Minoris S. P.	32.9	35.5	0.0	324 29 34.2	-41.7	.....	.....	.....	-0 42.7	57.4	.....	+88 27 13.4
	(h) Groomb. 144 S. P....	6.7	11.0	0.0	324 11 8.8	- 0.2	.....	.....	.....	-0 43.2	.....	.....	+88 9 29.0
	$\downarrow$ Virginis.....	52.1	54.9	+0.1	64 38 53.6	- 0.1	.....	.....	.....	+2 5.1	.....	.....	- 8 40 2.2
	(i) A. S. C. 91 S. P. ....	12.5	17.1	+0.1	321 25 14.9	- 0.2	.....	.....	.....	-0 47.7	.....	.....	+85 23 30.6
	(k) Groomb. 195 S. P. ...	50.0	54.4	+0.1	322 18 52.3	- 0.1	.....	.....	.....	-0 46.2	.....	.....	+86 17 9.6
	(l) Jupiter South L.....	22.9	25.1	+0.1	60 14 24.1	+ 0.3	.....	.....	.....	+1 43.8	.....	.....	- 4 15 11.8
	(b) Jupiter North L.....	40.2	43.2	+0.1	60 13 41.8	- 0.4	.....	.....	.....	+1.43.8	.....	.....	- 4 14 28.8
	$\theta$ Virginis.....	3.9	7.2	+0.1	60 40 5.6	- 0.1	.....	.....	.....	+1 45.7	.....	.....	- 4 40 54.8
	(m) $\alpha$ Ursæ Minoris S. P.	51.0	54.0	0.0	324 28 52.5	- 0.6	.....	.....	.....	-0 42.7	.....	.....	+88 27 12.8
	Pallas .....	28.1	30.1	0.0	42 18 29.1	- 0.1	.....	.....	.....	+0 54.2	.....	.....	+13 41 33.2
	(n) Groombridge 2007....	56.2	60.5	-0.1	330 25 58.2	.....	.....	.....	.....	-0 34.0	.....	.....	+85 35 32.2
	Ceres.....	43.5	46.7	+0.1	48 37 45.3	- 0.1	31.3	29.44	34.8	+1 7.6	.....	.....	+ 7 22 3.6
	(o) $\alpha$ Ursæ Minoris S. P.	49.5	52.0	0.0	324 29 50.8	-57.7	.....	.....	.....	-0 42.7	.....	.....	+88 27 14.0
	(p) $\alpha$ Ursæ Minoris.....	21.1	25.8	-0.1	327 33 23.4	+58.9	.....	.....	.....	-0 37.4	57.0	57.0	+88 27 12.1
Mar. 30	(q) Sun South L.....	38.7	44.0	+0.1	52 38 41.5	- 0.1	.....	.....	.....	+1 16.7	.....	.....	+ 3 20 58.9
	(r) Sun North L.....	39.9	44.0	+0.1	52 6 42.0	+ 0.2	38.1	29.40	38.5	+1 15.2	.....	.....	+ 3 52 59.6
	(n) $\alpha$ Ursæ Minoris .....	19.4	24.5	-0.1	327 34 21.9	.....	.....	.....	.....	-0 37.4	.....	.....	+88 27 12.5
	Mercury Centre.....	39.9	43.1	0.0	44 57 41.6	- 0.1	39.5	29.40	39.2	+0 58.3	.....	.....	+11 2 17.2
	$\alpha$ Arietis.....	20.7	23.9	-0.1	33 18 22.3	- 0.1	.....	.....	.....	+0 38.4	57.0	.....	+22 41 56.4
	(n) Venus North L.....	52.5	.....	0.0	43 27 54.6	.....	.....	.....	.....	+0 55.4	.....	.....	+12 32 7.0
	(b) Venus South L.....	0.8	4.8	0.0	43 28 2.9	+ 0.4	.....	.....	.....	+0 55.4	.....	.....	+12 31 58.3
	(s) 18 Ursæ Majoris.....	49.8	54.4	-0.5	1 19 51.6	.....	35.2	29.32	38.4	+0 1.3	.....	55.5	+54 41 2.6
	(t) 27 Hydræ.....	32.1	34.4	+0.1	64 51 33.3	- 0.5	.....	.....	.....	+2 4.8	.....	.....	- 8 52 42.1
	$\alpha$ Hydræ.....	53.7	55.3	+0.1	63 56 54.5	.....	.....	.....	.....	+1 59.8	55.2	.....	- 7 57 58.8
	$\theta$ Ursæ Majoris.....	18.5	22.9	-0.5	3 36 20.2	.....	.....	.....	.....	+0 3.7	56.3	.....	+52 24 31.6
	$\epsilon$ Hydræ .....	27.7	30.0	+0.1	56 24 29.0	.....	.....	.....	.....	+1 28.5	.....	.....	- 0 25 2.0
	$\epsilon$ Leonis.....	34.6	37.4	-0.1	31 29 35.9	.....	.....	.....	.....	+0 36.1	.....	.....	+24 30 43.5
	22 Leonis.....	7.5	10.0	-0.1	30 51 8.6	.....	.....	.....	.....	+0 35.2	.....	.....	+25 9 11.7
	(u) $\nu^2$ Hydræ.....	49.0	51.8	+0.1	68 15 50.5	- 0.1	.....	.....	.....	+2 26.7	.....	.....	-12 17 21.6
	$\lambda^2$ Hydræ.....	22.2	25.8	+0.1	67 32 24.0	.....	34.7	29.33	37.5	+2 21.5	.....	.....	-11 33 50.0
	37 Leonis Minoris ....	53.4	57.3	-0.2	23 11 55.1	.....	.....	.....	.....	+0 25.2	.....	.....	+32 48 35.2
	$\downarrow$ Ursæ Majoris .....	31.0	34.5	-0.4	10 38 32.4	.....	34.9	29.33	37.5	+0 11.0	.....	.....	+45 22 12.1
	Groombridge 1850....	45.7	50.0	-0.1	329 32 47.8	.....	34.5	29.32	37.0	-0 34.8	.....	.....	+86 28 42.5
	(v) $\alpha$ Ursæ Minoris S. P.	40.0	44.0	0.0	324 29 42.0	-51.3	.....	.....	.....	-0 42.2	55.9	.....	+88 27 13.0
	Groomb. 144 S. P....	6.0	10.6	0.0	324 11 8.3	.....	.....	.....	.....	-0 42.7	.....	.....	+88 9 30.1
	(w) $\downarrow$ Virginis.....	53.9	56.5	+0.1	64 38 55.3	- 0.4	.....	.....	.....	+2 3.7	.....	.....	- 8 40 3.1
	(x) A. S. C. 91 S. P.....	11.0	17.5	+0.1	321 25 14.3	- 0.1	.....	.....	.....	-0 47.2	.....	.....	+85 23 31.5
	(y) Jupiter Centre .....	4.1	7.5	+0.1	60 11 5.9	- 0.2	.....	.....	.....	+1 42.5	.....	.....	- 4 11 52.7
(a) 30 <sup>s</sup> before transit.		(g) At 12 <sup>h</sup> 33 <sup>m</sup> 5 <sup>s</sup> .		(n) On meridian.		vation Mr Adie cleaned		(u) 10 <sup>s</sup> after transit.					
(b) 36 <sup>s</sup> after transit.		(h) At 12 <sup>h</sup> 43 <sup>m</sup> 30 <sup>s</sup> .		(o) At 13 <sup>h</sup> 34 <sup>m</sup> 12 <sup>s</sup> .		the limb of the Circle, and		(v) At 12 <sup>h</sup> 30 <sup>m</sup> 0 <sup>s</sup> .					
(c) At 11 <sup>h</sup> 54 <sup>m</sup> 40 <sup>s</sup> .		(i) At 12 <sup>h</sup> 49 <sup>m</sup> 5 <sup>s</sup> .		(p) At 0 <sup>h</sup> 27 <sup>m</sup> 48 <sup>s</sup> .		moved the Wire-plate for		(w) 30 <sup>s</sup> after transit.					
(d) At 12 <sup>h</sup> 14 <sup>m</sup> 50 <sup>s</sup> .		(k) At 12 <sup>h</sup> 51 <sup>m</sup> 36 <sup>s</sup> .		(q) At 0 <sup>h</sup> 33 <sup>m</sup> 0 <sup>s</sup> .		the better adjustment of		(x) At 12 <sup>h</sup> 49 <sup>m</sup> 40 <sup>s</sup> .					
(e) At 12 <sup>h</sup> 26 <sup>m</sup> 2 <sup>s</sup> .		(l) At Wire I.		(r) At 0 <sup>h</sup> 34 <sup>m</sup> 24 <sup>s</sup> .		the line of collimation.		(y) At Wire IV.					
(f) At 12 <sup>h</sup> 27 <sup>m</sup> 28 <sup>s</sup> .		(m) At 13 <sup>h</sup> 4 <sup>m</sup> 35 <sup>s</sup> .		(s) Before this obser-		(t) At Wire V.							



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Mar. 30	(a) $\alpha$ Ursæ Minoris S. P.	47.7	52.0	0.0	324 28 49.9	- 0.3	.....	In.	.....	-0 42.2	.....	55.5	+88 27 11.9
	(b) Moon South L.	32.8	35.2	+0.1	66 51 34.1	- 1.2	.....	.....	.....	+2 17.0	.....	.....	-10 52 54.4
	(c) .....	49.8	52.2	+0.1	66 51 51.0	-18.0	.....	.....	.....	+2 17.0	.....	.....	-10 52 54.5
	(d) $\alpha$ Virginis	2.1	5.5	+0.1	66 18 4.0	.....	.....	.....	.....	+2 13.4	54.7	.....	-10 19 21.9
	Ceres	20.9	23.2	+0.1	48 33 22.2	.....	.....	.....	.....	+1 6.6	.....	.....	+ 7 26 26.7
	(e) $\alpha$ Ursæ Minoris S. P.	44.0	47.8	0.0	324 29 45.9	-55.4	34.0	29.27	36.7	-0 42.2	.....	.....	+88 27 12.8
April 4	$\pi^2$ Ursæ Majoris	51.5	54.0	-0.5	351 7 52.3	.....	33.0	29.67	35.8	-0 9.4	.....	55.5	+64 53 12.6
	$\epsilon$ Hydræ	30.2	33.4	+0.1	48 59 31.9	.....	.....	.....	.....	+1 8.7	.....	.....	+ 7 0 14.9
	(f) A. S. C. 1075	7.4	11.0	+0.1	57 18 9.4	- 0.7	.....	.....	.....	+1 33.0	.....	.....	- 1 18 46.2
	$\alpha$ Hydræ	52.5	53.9	+0.1	63 56 53.2	.....	.....	.....	.....	+2 1.8	55.7	.....	- 7 57 59.5
	$\theta$ Ursæ Majoris	17.1	21.0	-0.5	3 36 18.5	.....	33.0	29.66	35.8	+0 3.7	55.3	.....	+52 24 33.3
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
April 7	(g) $\alpha$ Ursæ Minoris	40.5	44.9	-0.1	327 33 42.6	+42.2	41.5	30.10	40.0	-0 37.9	56.5	56.5	+88 27 9.6
	.....	22.6	27.2	-0.1	327 34 24.8	.....	.....	.....	.....	-0 37.9	.....	.....	+88 27 9.6
April 8	(h) Sun North L.	29.2	32.2	+0.1	48 40 30.8	- 0.1	.....	.....	.....	+1 7.5	.....	.....	+ 7 19 18.3
	(i) Sun South L.	25.2	28.1	+0.1	49 12 26.7	+ 0.5	.....	.....	.....	+1 8.8	.....	.....	+ 6 47 20.5
	(k) $\alpha$ Ursæ Minoris	21.9	26.1	-0.1	327 33 24.0	+60.9	43.8	30.09	41.8	-0 37.9	.....	.....	+88 27 9.5
	Mercury Centre	19.0	23.0	0.0	39 27 20.9	.....	.....	.....	.....	+0 48.7	.....	.....	+16 32 46.9
	(h) Venus South L.	53.3	.....	0.0	39 33 55.1	- 0.1	.....	.....	.....	+0 48.9	.....	.....	+16 26 12.6
	(l) Venus North L.	38.8	42.4	0.0	39 33 40.6	+ 0.2	44.0	30.08	42.7	+0 48.9	.....	.....	+16 26 26.8
	$\alpha$ Hydræ	50.7	53.0	+0.1	63 56 51.9	.....	34.1	30.14	37.5	+2 3.4	55.9	.....	- 7 57 58.8
	$\epsilon$ Hydræ	25.3	29.0	+0.1	56 24 27.3	.....	.....	.....	.....	+1 31.1	.....	.....	- 0 25 1.9
	$\alpha$ Leonis	56.8	61.8	0.0	43 14 59.3	.....	.....	.....	.....	+0 57.1	56.9	.....	+12 45 0.1
	(m) $\lambda^2$ Hydræ	18.1	22.8	+0.1	67 32 20.5	- 0.4	.....	.....	.....	+2 25.9	.....	.....	-11 33 49.5
	$\mu$ Hydræ	1.6	4.9	+0.1	71 59 3.4	.....	33.1	30.15	35.9	+3 4.8	.....	.....	-16 1 11.7
	37 Leonis Minoris	52.0	57.2	-0.2	23 11 54.3	.....	.....	.....	.....	+0 26.1	.....	.....	+32 48 36.1
	3 Hydræ & Crateris	55.4	59.0	+0.1	72 24 57.3	.....	.....	.....	.....	+3 9.7	.....	.....	-16 27 10.5
	* R. A. 10 <sup>h</sup> 53 <sup>m</sup> 53 <sup>s</sup>	57.0	61.0	+0.1	46 15 59.1	.....	.....	.....	.....	+1 3.6	.....	.....	+ 9 43 53.8
	(n) Mars North L.	25.5	29.3	+0.1	46 16 27.5	+ 0.2	.....	.....	.....	+1 3.6	.....	.....	+ 9 43 25.2
	(o) Mars South L.	41.5	44.1	+0.1	46 16 42.8	- 0.2	.....	.....	.....	+1 3.6	.....	.....	+ 9 43 10.3
	$\epsilon$ Leonis	7.5	13.1	0.0	44 35 10.3	.....	32.0	30.15	35.4	+1 0.0	.....	.....	+11 24 46.2
	$\beta$ Leonis	54.3	58.4	0.0	40 31 56.3	.....	.....	.....	.....	+0 52.1	56.8	.....	+15 28 8.1
	(p) $\alpha$ Ursæ Minoris S. P.	37.8	41.8	0.0	324 29 39.8	-49.8	32.9	30.16	35.0	-0 43.7	56.6	.....	+88 27 9.8
	(h) Jupiter North L.	59.1	63.3	+0.1	59 44 1.3	+ 0.2	.....	.....	.....	+1 44.0	.....	.....	- 3 44 49.0
	(m) Jupiter South L.	42.0	45.0	+0.1	59 44 43.6	- 0.2	.....	.....	.....	+1 44.0	.....	.....	- 3 45 30.9
	(q) Groomb. 195 S. P.	53.1	58.0	+0.1	322 18 55.7	- 3.6	.....	.....	.....	-0 47.2	.....	.....	+86 17 8.4
	$\alpha$ Ursæ Minoris S. P.	47.0	52.5	0.0	324 28 49.8	.....	.....	.....	.....	-0 43.7	.....	.....	+88 27 9.6
	Pallas	24.1	29.0	0.0	39 12 26.5	.....	.....	.....	.....	+0 49.7	.....	.....	+16 47 40.3
	(r) $\alpha$ Ursæ Minoris S. P.	23.4	27.8	0.0	324 29 25.6	-36.2	32.0	30.16	34.9	-0 43.7	.....	.....	+88 27 9.2
April 10	Mercury Centre	6.8	10.1	0.0	38 46 8.4	.....	38.1	30.38	38.8	+0 48.6	.....	56.6	+17 13 59.6
	(h) Venus North L.	50.0	.....	0.0	38 45 52.1	- 0.1	.....	.....	.....	+0 48.6	.....	.....	+17 14 16.0
	Venus South L.	1.1	5.3	0.0	38 46 3.2	.....	.....	.....	.....	+0 48.6	.....	.....	+17 14 4.8
	$\epsilon$ Hydræ	25.0	28.2	+0.1	56 24 26.7	.....	35.0	30.38	38.3	+1 31.6	.....	.....	- 0 25 1.7
	$\epsilon$ Leonis	33.5	36.3	-0.1	31 29 34.8	.....	.....	.....	.....	+0 37.4	.....	.....	+24 30 44.4
	$\alpha$ Leonis	56.4	61.0	0.0	43 14 58.7	.....	.....	.....	.....	+0 57.3	56.5	.....	+12 45 0.6
	(s) Mars Centre	44.9	48.9	+0.1	46 13 46.9	- 0.2	35.7	30.39	37.9	+1 3.5	.....	.....	+ 9 46 6.4
	(t) $\alpha$ Ursæ Minoris S. P.	36.4	40.2	0.0	324 29 38.3	-48.5	34.9	30.39	37.8	-0 43.7	58.2	.....	+88 27 9.5
	(u) Jupiter South L.	47.5	51.0	+0.1	59 38 49.4	+ 0.2	.....	.....	.....	+1 43.9	.....	.....	- 3 39 36.9
	$\alpha$ Ursæ Minoris S. P.	49.3	54.0	0.0	324 28 51.7	.....	.....	.....	.....	-0 43.7	.....	.....	+88 27 11.4
	(x) Pallas	23.8	27.9	0.0	38 39 25.9	+ 0.3	.....	.....	.....	+0 48.8	.....	.....	+17 20 41.6
	$\alpha$ Virginis	58.0	62.2	+0.1	66 18 0.3	.....	35.0	30.39	37.8	+2 18.2	55.1	.....	-10 19 21.9
	(y) $\alpha$ Ursæ Minoris	20.4	25.7	-0.1	327 34 23.0	+ 2.5	41.8	30.33	39.8	-0 38.3	55.9	55.4	+88 27 8.2
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

(a) At 12<sup>h</sup> 58<sup>m</sup> 50<sup>s</sup>.(b) At 13<sup>h</sup> 10<sup>m</sup> 1<sup>s</sup>.(c) At 13<sup>h</sup> 11<sup>m</sup> 11<sup>s</sup>.

(d) Very tremulous.

(e) At 13<sup>h</sup> 33<sup>m</sup> 30<sup>s</sup>.(f) At 8<sup>h</sup> 40<sup>m</sup> 40<sup>s</sup>.(g) At 0<sup>h</sup> 33<sup>m</sup> 20<sup>s</sup>.

(h) At Wire I.

(i) At 1<sup>h</sup> 7<sup>m</sup> 43<sup>s</sup>.(k) At 1<sup>h</sup> 35<sup>m</sup> 30<sup>s</sup>.(l) 15<sup>s</sup> after transit.(m) 30<sup>s</sup> after transit.

(n) At Wire II.

(o) 42<sup>s</sup> after transit.(p) At 12<sup>h</sup> 30<sup>m</sup> 56<sup>s</sup>.(q) At 12<sup>h</sup> 56<sup>m</sup> 25<sup>s</sup>.(r) At 13<sup>h</sup> 27<sup>m</sup> 45<sup>s</sup>.(s) 48<sup>s</sup> after transit.(t) At 12<sup>h</sup> 31<sup>m</sup> 30<sup>s</sup>.(u) 30<sup>s</sup> before transit.

(x) At Wire V.

(y) At 1<sup>h</sup> 8<sup>m</sup> 40<sup>s</sup>.



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.	
		I.	II.								observed.	adopted.		
April 11	(a) Sun South L.....	34.7	38.1	+0.1	48 5 36.5	- 0.1	.....	.....	.....	+1 6.8	.....	55.4	+ 7 54 12.2	
	(b) Sun North L.....	40.0	43.5	+0.1	47 33 41.9	+ 0.5	.....	.....	.....	+1 5.5	.....	.....	+ 8 26 7.5	
	(c) Venus Centre .....	35.8	40.1	0.0	38 22 38.0	+ 0.5	44.9	30.31	42.0	+0 47.2	.....	.....	+17 37 29.7	
	27 Hydræ.....	30.7	33.0	+0.1	64 51 31.9	.....	45.5	30.25	44.6	+2 5.8	.....	.....	- 8 52 42.3	
	(d) α Hydræ.....	52.7	55.5	+0.1	63 56 54.1	- 0.4	.....	.....	.....	+2 0.8	55.0	.....	- 7 57 59.1	
	(e) α Ursæ Minoris.....	11.9	17.5	-0.1	327 34 14.6	+10.3	.....	.....	.....	-0 37.1	56.2	56.2	.....	
April 12	(f) Sun North L.....	40.5	45.0	+0.1	47 11 42.8	- 0.1	.....	.....	.....	+1 2.8	.....	.....	+ 8 48 10.7	
	(g) Sun South L.....	32.0	37.2	+0.1	47 43 34.7	+ 0.6	51.9	30.07	44.3	+1 4.0	.....	.....	+ 8 16 16.9	
	(h) Venus South L.....	55.0	.....	0.0	37 59 56.3	- 0.1	.....	.....	.....	+0 45.3	.....	.....	+18 0 14.7	
	(i) Venus North L.....	42.9	45.4	0.0	37 59 44.2	+ 0.2	53.0	30.07	48.5	+0 45.3	.....	.....	+18 0 26.5	
April 13	Sun South L.....	44.4	47.3	+0.1	47 21 45.9	.....	.....	.....	.....	+1 3.3	.....	54.8	+ 8 38 5.6	
	(k) Sun North L.....	48.5	51.5	+0.1	46 49 50.1	+ 1.1	48.6	29.93	47.0	+1 2.1	.....	.....	+ 9 10 1.5	
	(l) Venus North L.....	18.3	.....	0.0	37 37 20.1	0.0	.....	.....	.....	+0 44.7	.....	.....	+18 22 50.0	
	(c) Venus South L.....*	30.1	33.8	0.0	37 37 31.9	+ 0.5	51.1	29.91	50.0	+0 44.7	.....	.....	+18 22 37.7	
	α Tauri.....	11.0	16.0	0.0	39 49 13.5	.....	51.8	29.90	49.9	+0 48.2	55.6	.....	+16 10 53.1	
	(i) α Aurigæ.....	52.0	57.9	-0.4	10 10 54.5	0.0	.....	.....	.....	+0 10.4	54.1	.....	+45 49 49.9	
	β Tauri.....	18.0	24.2	-0.1	27 32 20.9	.....	52.0	29.89	50.8	+0 30.1	53.8	.....	+28 28 3.8	
	(i) Mars Centre .....	49.6	54.2	+0.1	46 11 51.9	- 0.1	44.0	29.91	46.2	+1 1.4	.....	.....	+ 9 48 1.6	
	(m) α Ursæ Minoris S. P.	44.9	49.0	0.0	324 28 47.0	- 1.1	44.2	29.91	45.2	-0 42.2	55.7	.....	+88 27 8.9	
	April 17	(n) μ Hydræ.....	13.2	16.5	+0.1	71 59 15.0	- 1.3	40.8	28.88	43.4	+2 54.0	.....	55.0	-16 1 12.7
(l) Mars South L.....		39.7	43.4	+0.1	46 13 41.7	+ 0.1	.....	.....	.....	+0 59.7	.....	.....	+ 9 46 13.5	
(o) Mars North L.....		27.2	31.8	+0.1	46 13 29.6	- 0.2	.....	.....	.....	+0 59.7	.....	.....	+ 9 46 25.9	
δ Leonis.....		2.0	6.7	0.0	34 36 4.3	.....	40.9	28.88	42.4	+0 39.5	55.4	.....	+21 24 11.2	
δ Hydræ & Crateris...		1.1	4.0	+0.1	69 53 2.7	.....	.....	.....	.....	+2 34.9	54.9	.....	-13 54 42.6	
ε Leonis.....		10.8	16.0	0.0	44 35 13.4	.....	.....	.....	.....	+0 56.4	.....	.....	+11 24 45.2	
β Leonis.....		54.9	59.5	0.0	40 31 57.1	.....	.....	.....	.....	+0 49.0	55.2	.....	+15 28 8.9	
(p) α Ursæ Minoris S. P.		30.7	35.1	0.0	324 29 32.9	-50.8	40.0	28.89	41.4	-0 41.1	54.4	.....	+88 27 6.0	
(q) Jupiter North L.....		30.2	33.5	+0.1	59 18 32.0	0.0	.....	.....	.....	+1 36.4	.....	.....	- 3 19 13.4	
(r) Jupiter South L.....		12.4	15.9	+0.1	59 19 14.3	- 0.6	.....	.....	.....	+1 36.4	.....	.....	- 3 19 55.1	
(s) Groomb. 195 S. P....		39.9	44.9	+0.1	322 18 42.5	- 0.7	.....	.....	.....	-0 44.5	.....	.....	+86 17 2.3	
α Ursæ Minoris S. P.		40.2	44.9	0.0	324 28 42.6	.....	40.0	28.90	41.3	-0 41.1	.....	.....	+88 27 6.5	
April 18		(t) Venus North L.....	39.6	.....	0.0	35 52 41.6	+ 0.1	.....	.....	.....	+0 41.1	.....	55.9	+20 7 33.1
		Venus South L.....	52.3	56.1	0.0	35 52 54.3	.....	44.6	28.93	44.7	+0 41.1	.....	.....	+20 7 20.5
		δ Orionis.....	53.0	57.9	+0.1	56 24 55.6	.....	.....	.....	.....	+1 25.4	57.3	.....	- 0 25 25.1
	ε Orionis.....	0.8	5.0	+0.1	57 18 3.1	.....	45.3	28.94	45.5	+1 28.3	55.8	.....	- 1 18 35.5	
	α Orionis.....	29.8	33.9	+0.1	48 37 31.9	.....	.....	.....	.....	+1 4.6	55.4	.....	+ 7 22 19.4	
	(u) Moon South L.....	56.0	61.0	-0.1	28 8 58.4	- 0.5	43.0	28.97	44.9	+0 30.6	.....	.....	+27 51 27.4	
	(x) α Ursæ Minoris S. P.	33.0	37.6	0.0	324 29 35.3	-51.7	37.7	29.01	39.8	-0 41.5	55.0	.....	+88 27 6.2	
	(t) Jupiter South L.....	31.8	34.2	+0.1	59 16 33.1	+ 0.2	.....	.....	.....	+1 37.1	.....	.....	- 3 17 14.5	
	(c) Jupiter North L.....	46.3	50.3	+0.1	59 15 48.4	- 0.3	.....	.....	.....	+1 37.1	.....	.....	- 3 16 29.3	
	Pallas.....	39.8	44.0	0.0	36 43 41.9	.....	.....	.....	.....	+0 43.2	.....	.....	+19 16 30.8	
	α Ursæ Minoris S. P.	40.2	45.0	0.0	324 28 42.6	.....	.....	.....	.....	-0 41.5	.....	.....	+88 27 5.2	
	Ceres.....	40.8	43.1	+0.1	47 37 42.1	.....	.....	.....	.....	+1 3.4	.....	.....	+ 8 22 10.4	
	Groombridge 2007...	47.1	51.2	-0.1	330 25 49.0	.....	37.8	29.02	39.6	-0 33.0	.....	.....	+85 35 39.9	
	α Orionis.....	29.0	32.2	+0.1	48 37 30.6	.....	47.0	29.24	45.9	+1 4.8	54.4	54.4	.....	
	April 20	(t) Sun North L.....	10.1	15.4	0.0	44 21 12.7	0.0	.....	.....	.....	+0 56.4	.....	54.6	+11 38 45.5
(c) Sun South L.....		58.9	63.0	0.0	44 53 1.0	+ 0.4	48.9	29.66	48.0	+0 57.5	.....	.....	+11 6 55.7	
(y) Venus South L.....		36.0	.....	0.0	35 14 38.4	+ 0.2	.....	.....	.....	+0 40.8	.....	.....	+20 45 35.2	
(r) Venus North L.....		23.0	27.7	0.0	35 14 25.4	+ 0.9	49.8	29.68	48.8	+0 40.8	.....	.....	+20 45 47.5	
α Ursæ Minoris S. P.		39.5	44.9	0.0	324 28 42.2	.....	42.0	29.81	43.2	-0 42.3	54.4	.....	+88 27 5.3	
(a) At 1 <sup>h</sup> 17 <sup>m</sup> 21 <sup>s</sup> .		(f) At 1 <sup>h</sup> 21 <sup>m</sup> 14 <sup>s</sup> .		(l) 10 <sup>s</sup> before transit.		(p) At 12 <sup>h</sup> 30 <sup>m</sup> 16 <sup>s</sup> .		(t) At Wire I.						
(b) At 1 <sup>h</sup> 18 <sup>m</sup> 56 <sup>s</sup> .		(g) At 1 <sup>h</sup> 22 <sup>m</sup> 50 <sup>s</sup> .		(m) At 13 <sup>h</sup> 5 <sup>m</sup> 30 <sup>s</sup> .		(q) 5 <sup>s</sup> after transit.		(u) At 6 <sup>h</sup> 14 <sup>m</sup> 28 <sup>s</sup> .						
(c) At Wire V.		(h) 24 <sup>s</sup> before transit.		(n) 1 <sup>m</sup> 15 <sup>s</sup> after transit.		(r) 1 <sup>m</sup> after transit.		(x) At 12 <sup>h</sup> 30 <sup>m</sup> 6 <sup>s</sup> .						
(d) 30 <sup>s</sup> after transit.		(i) At Wire IV.		(o) 54 <sup>s</sup> after transit.		(s) At 12 <sup>h</sup> 53 <sup>m</sup> 0 <sup>s</sup> .		(y) 48 <sup>s</sup> before transit.						
(e) At 1 <sup>h</sup> 15 <sup>m</sup> 50 <sup>s</sup> .		(k) At 1 <sup>h</sup> 27 <sup>m</sup> 3 <sup>s</sup> .												



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.		°	'	"						observed.	adopted.	
April 20	Ceres.....	33.8	37.0	+0.1	47	35	35.5	.....	.....	.....	.....	+1 4.5	.....	54.6	+ 8 24 14.6
	ζ Ursæ Majoris.....	57.2	62.8	-0.5	0	14	59.5	.....	.....	.....	.....	+0 0.2	54.7	.....	+55 45 54.9
	(a) α Ursæ Minoris S. P.	1.1	6.5	0.0	324	29	3.8	-20.7	.....	.....	.....	-0 42.3	.....	.....	+88 27 6.2
April 21	(b) Moon North L. ....	32.7	34.6	0.0	36	24	33.7	+ 9.4	.....	.....	.....	+0' 42.9	.....	56.0	+19 35 30.0
	(c) .....	49.4	52.7	0.0	36	24	51.1	- 7.2	49.1	29.86	48.2	+0 42.9	.....	.....	+19 35 29.2
	α Hydræ.....	56.6	58.0	+0.1	63	56	57.3	.....	.....	.....	.....	+1 58.4	56.1	.....	- 7 57 59.7
	λ Leonis.....	49.8	53.1	-0.1	32	19	51.4	.....	.....	.....	.....	+0 36.8	.....	.....	+23 40 27.8
	ψ Leonis.....	47.8	51.5	0.0	41	14	49.7	.....	.....	.....	.....	+0 51.0	.....	.....	+14 45 15.3
	ε Leonis.....	33.3	36.8	-0.1	31	29	35.0	.....	.....	.....	.....	+0 35.7	.....	.....	+24 30 45.3
	α Leonis .....	57.8	62.0	0.0	43	14	59.9	.....	48.0	29.87	48.6	+0 54.8	55.8	.....	+12 45 1.3
April 23	(d) Venus North L. ....	10.0	....	0.0	34	21	13.1	+ 0.1	.....	.....	.....	+0 39.6	.....	55.4	+21 39 2.6
	Venus South L. ....	20.0	26.2	0.0	34	21	23.1	.....	47.0	29.67	46.8	+0 39.6	.....	.....	+21 38 52.7
	α Tauri.....	10.3	15.3	0.0	39	49	12.8	.....	.....	.....	.....	+0 48.4	55.1	.....	+16 10 54.2
	α Aurigæ.....	54.1	60.6	-0.4	10	10	56.9	.....	.....	.....	.....	+0 10.4	55.3	.....	+45 49 48.1
	(e) β Tauri.....	20.1	26.0	-0.1	27	32	22.9	- 0.1	45.5	29.68	47.0	+0 30.4	55.5	.....	+28 28 2.2
	(f) γ Leonis.....	0.7	7.0	0.0	35	21	3.8	0.0	44.8	29.74	45.8	+0 41.4	.....	.....	+20 39 10.2
	(g) α Ursæ Minoris S. P.	21.5	26.9	0.0	324	29	24.2	-41.0	42.0	29.76	45.2	-0 42.2	55.9	.....	+88 27 5.6
April 24	(d) Sun South L.....	3.6	8.8	0.0	43	32	6.1	0.0	.....	.....	.....	+0 55.7	.....	55.5	+12 27 53.7
	(h) Sun North L.....	12.9	18.1	0.0	43	0	15.5	+ 0.6	44.2	29.83	45.2	+0 54.7	.....	.....	+12 59 44.7
	(i) Venus South L. ....	46.6	....	-0.1	34	4	49.0	0.0	.....	.....	.....	+0 39.5	.....	.....	+21 55 27.0
	(e) Venus North L. ....	32.9	37.9	-0.1	34	4	35.3	+ 0.1	45.7	29.81	46.0	+0 39.5	.....	.....	+21 55 40.6
	α Tauri.....	10.5	16.0	0.0	39	49	13.3	.....	.....	.....	.....	+0 48.7	55.9	.....	+16 10 53.5
	α Canis Majoris .....	55.5	60.9	+0.1	72	27	58.4	.....	46.0	29.79	46.7	+3 2.5	55.2	.....	-16 30 5.4
	(k) δ Hydræ & Crateris...	57.8	61.4	+0.1	69	52	59.8	- 1.0	42.0	29.77	45.1	+2 39.2	55.0	.....	-13 54 42.5
	τ Leonis .....	16.0	21.6	+0.1	52	15	18.6	.....	.....	.....	.....	+1 15.9	.....	.....	+ 3 44 21.0
	(l) Moon North L. ....	20.0	25.7	+0.1	52	51	22.9	+ 8.6	.....	.....	.....	+1 17.6	.....	.....	+ 3 8 6.4
	(m) .....	39.9	44.6	+0.1	52	51	42.0	-11.2	.....	.....	.....	+1 17.6	.....	.....	+ 3 8 7.1
	β Virginis.....	28.3	33.0	+0.1	53	19	30.8	.....	.....	.....	.....	+1 18.9	.....	.....	+ 2 40 5.8
	ο Virginis.....	25.0	29.1	+0.1	46	22	27.1	.....	.....	.....	.....	+1 1.7	.....	.....	+ 9 37 26.7
	(n) α Ursæ Minoris S. P.	23.9	33.0	0.0	324	29	31.0	-48.4	42.0	29.78	45.3	-0 42.2	56.0	.....	+88 27 4.9
	(d) Jupiter North L.....	20.2	24.1	+0.1	59	0	22.2	+ 0.2	.....	.....	.....	+1 37.6	.....	.....	- 3 1 4.5
	(o) Jupiter South L.....	1.6	5.9	+0.1	59	1	3.8	- 0.3	.....	.....	.....	+1 37.6	.....	.....	- 3 1 45.6
April 25	α Ursæ Minoris S. P.	40.5	46.0	0.0	324	28	43.3	.....	42.8	29.78	45.2	-0 42.2	.....	.....	+88 27 5.6
	α Canis Majoris .....	1.8	6.0	+0.1	72	28	4.1	.....	55.2	29.66	53.3	+2 58.2	56.7	56.7	.....
April 26	α Leonis.....	55.8	61.9	0.0	43	14	58.9	.....	44.7	29.83	48.8	+0 55.1	55.3	55.7	+12 45 1.7
	Mars Centre .....	1.9	8.0	+0.1	46	34	5.1	.....	45.9	29.84	47.0	+1 1.7	.....	.....	+ 9 25 48.9
	δ Leonis .....	0.7	6.0	0.0	34	36	3.3	.....	.....	.....	.....	+0 40.4	56.2	.....	+21 24 12.0
	β Leonis .....	54.0	58.0	0.0	40	31	55.9	.....	.....	.....	.....	+0 50.1	55.9	.....	+15 28 9.7
	(e) γ Virginis .....	33.0	38.0	+0.1	56	33	35.6	- 0.2	44.0	29.83	44.9	+1 28.7	.....	.....	- 0 34 8.4
	Jupiter Centre.....	51.6	55.1	+0.1	58	55	53.4	.....	.....	.....	.....	+1 37.2	.....	.....	- 2 56 34.9
	ψ Virginis.....	52.9	56.5	+0.1	64	38	54.8	.....	.....	.....	.....	+2 3.4	.....	.....	- 8 40 2.5
	(p) Moon North L. ....	16.1	19.9	+0.1	64	31	18.1	+ 9.4	.....	.....	.....	+2 2.8	.....	.....	- 8 32 34.6
	(q) .....	34.8	37.7	+0.1	64	31	36.3	-10.3	.....	.....	.....	+2 2.8	.....	.....	- 8 32 33.1
	α Ursæ Minoris S. P.	39.2	43.5	0.0	324	28	41.4	.....	.....	.....	.....	-0 42.2	55.0	.....	+88 27 3.5
	Ceres .....	12.7	16.9	+0.1	47	34	14.9	.....	.....	.....	.....	+1 4.3	.....	.....	+ 8 25 36.5
	α Virginis.....	4.2	8.8	+0.1	66	18	6.7	.....	.....	.....	.....	+2 13.5	56.1	.....	-10 19 24.5
April 27	Groombridge 2007 ...	45.0	50.1	-0.1	330	25	47.4	.....	42.6	29.84	43.9	-0 33.6	.....	.....	+85 35 41.9
	(r) Sun North L.....	45.5	50.1	0.0	42	1	47.7	+ 0.1	.....	.....	.....	+0 52.3	.....	55.5	+13 58 15.4
	(s) Sun South L.....	32.8	36.6	0.0	42	33	34.7	+ 0.5	49.9	29.86	49.5	+0 53.3	.....	.....	+13 26 27.0
	(t) Venus Centre .....	27.8	32.9	-0.1	33	18	30.3	+ 0.4	50.8	29.86	50.6	+0 38.1	.....	.....	+22 41 46.7
	δ Leonis .....	1.0	6.0	0.0	34	36	3.5	.....	47.8	29.90	48.0	+0 40.3	56.4	.....	+21 24 11.7

(a) At 13<sup>h</sup> 21<sup>m</sup> 20<sup>s</sup>.(b) At 9<sup>h</sup> 9<sup>m</sup> 47<sup>s</sup>.(c) At 9<sup>h</sup> 11<sup>m</sup> 11<sup>s</sup>.

(d) At Wire I.

(e) At Wire IV.

(f) 48<sup>s</sup> after transit.(g) At 12<sup>h</sup> 33<sup>m</sup> 55<sup>s</sup>.(h) 57<sup>s</sup> after transit.

(i) At Wire II.

(k) 1<sup>m</sup> after transit.(l) At 11<sup>h</sup> 29<sup>m</sup> 32<sup>s</sup>.(m) At 11<sup>h</sup> 30<sup>m</sup> 53<sup>s</sup>.(n) At 12<sup>h</sup> 31<sup>m</sup> 35<sup>s</sup>.

(o) At Wire V.

(p) At 12<sup>h</sup> 55<sup>m</sup> 37<sup>s</sup>.(q) At 12<sup>h</sup> 57<sup>m</sup> 0<sup>s</sup>.(r) At 2<sup>h</sup> 16<sup>m</sup> 53<sup>s</sup>.(s) At 2<sup>h</sup> 18<sup>m</sup> 28<sup>s</sup>.

(t) At Wire V.: cloudy.

Date.	Object Observed.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduction to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
April 27	(a) Ceres .....	41.9	46.3	+0.1	47 34 44.2	- 0.2	.....	In.	.....	+1 4.0	.....	55.5	+ 8 25 7.5
	(b) $\alpha$ Ursæ Minoris S. P.	42.0	48.0	0.0	324 28 45.0	- 4.5	46.1	29.91	47.0	-0 42.0	54.5	.....	+88 27 3.0
	$\alpha$ Virginis .....	3.5	7.9	+0.1	66 18 5.9	.....	.....	.....	.....	+2 12.7	54.5	.....	-10 19 23.1
	(c) Moon North L. ....	38.1	42.3	+0.1	69 59 40.3	+ 9.7	.....	.....	.....	+2 39.6	.....	.....	-14 1 34.1
	(d) Moon South L. ....	32.8	36.9	+0.1	70 29 35.0	-10.0	.....	.....	.....	+2 43.9	.....	.....	-14 31 13.4
	$\eta$ Bootis .....	57.0	61.8	0.0	36 47 59.5	.....	45.7	29.91	46.4	+0 43.9	56.6	.....	+19 12 12.1
April 29	(e) $\epsilon$ Bootis .....	14.7	20.8	-0.1	28 15 17.6	+ 0.3	48.5	29.71	48.9	+0 31.1	55.6	54.8	+27 45 5.8
	$\beta$ Ursæ Minoris .....	36.6	42.6	-0.4	341 12 39.3	.....	.....	.....	.....	-0 19.8	54.1	.....	+74 48 35.3
April 30	Jupiter Centre .....	49.0	54.0	+0.1	58 46 51.5	.....	53.0	29.63	53.2	+1 34.1	.....	54.0	- 2 47 31.6
	12 Canum Venat. ....	21.2	25.2	-0.3	16 49 22.9	.....	.....	.....	.....	+0 17.3	54.1	.....	+39 11 13.8
	(f) Pallas .....	5.0	10.2	0.0	34 41 7.6	+ 0.2	.....	.....	.....	+0 39.6	.....	.....	+21 19 6.6
	$\alpha$ Ursæ Minoris S. P.	34.6	40.0	0.0	324 28 37.3	.....	.....	.....	.....	-0 41.0	53.1	.....	+88 27 2.3
	Ceres .....	27.9	32.2	+0.1	47 37 30.1	.....	.....	.....	.....	+1 2.7	.....	.....	+ 8 22 21.2
	(g) $\alpha$ Virginis .....	7.4	12.1	+0.1	66 18 9.9	+ 0.2	.....	.....	.....	+2 9.7	55.6	.....	-10 19 25.8
	(f) $\zeta$ Ursæ Majoris .....	52.9	58.9	-0.5	0 14 55.4	+ 0.7	52.3	29.63	52.9	+0 0.2	53.3	.....	+55 45 57.7
	(h) Sun South L. ....	39.9	45.4	0.0	41 18 42.7	+ 0.2	59.1	29.63	57.2	+0 49.6	.....	54.4	+14 41 21.9
May 2	(g) Sun South L. ....	32.4	36.3	0.0	41 0 34.3	0.0	.....	.....	.....	+0 50.5	.....	54.8	+14 59 30.0
	(i) Sun North L. ....	46.4	50.9	0.0	40 28 48.7	+ 1.2	47.3	29.76	49.0	+0 49.6	.....	.....	+15 31 15.3
	Mars Centre .....	13.9	19.6	+0.1	46 59 16.9	.....	45.0	29.71	48.5	+1 2.5	.....	.....	+ 9 0 35.4
	$\delta$ Leonis .....	57.9	65.1	0.0	34 36 1.5	.....	.....	.....	.....	+0 40.3	54.9	.....	+21 24 13.0
	(k) $\delta$ Hydræ & Crateris...	57.6	61.2	+0.1	69 52 59.6	- 0.2	.....	.....	.....	+2 38.0	54.1	.....	-13 54 42.6
	$\beta$ Leonis .....	51.2	57.0	0.0	40 31 54.0	.....	.....	.....	.....	+0 49.9	54.4	.....	+15 28 10.9
	(l) $\alpha$ Ursæ Minoris S. P.	20.3	25.2	0.0	324 29 22.8	-42.5	43.0	29.68	47.8	-0 42.0	56.0	.....	+88 27 3.5
	(g) Jupiter South L. ....	54.5	60.7	+0.1	58 42 57.8	+ 0.2	.....	.....	.....	+1 36.1	.....	.....	- 2 43 39.3
	(f) Jupiter North L. ....	13.4	19.8	+0.1	58 42 16.6	- 0.3	.....	.....	.....	+1 36.1	.....	.....	- 2 42 57.6
	Pallas .....	26.9	32.0	0.0	34 26 29.4	.....	.....	.....	.....	+0 40.2	.....	.....	+21 33 45.2
	Ceres .....	16.5	21.2	+0.1	47 40 18.9	.....	.....	.....	.....	+1 4.3	.....	.....	+ 8 19 31.6
	(m) $\alpha$ Ursæ Minoris S. P.	40.0	45.1	0.0	324 28 42.6	- 1.2	42.5	29.68	47.5	-0 42.0	.....	.....	+88 27 4.6
May 6	(n) $\alpha$ Canis Majoris .....	54.4	61.0	+0.1	72 27 57.9	- 0.4	42.8	29.88	45.7	+3 4.3	57.2	54.8	-16 30 7.0
	$\alpha$ Ursæ Majoris .....	42.5	48.2	-0.6	353 23 44.8	.....	.....	.....	.....	-0 7.0	52.8	.....	+62 37 17.0
	Mars Centre .....	29.5	34.2	+0.1	47 20 31.9	.....	40.0	29.87	44.4	+1 4.3	.....	.....	+ 8 39 18.6
	$\delta$ Leonis .....	56.7	62.2	0.0	34 35 59.4	.....	.....	.....	.....	+0 40.9	53.7	.....	+21 24 14.5
	(o) $\alpha$ Ursæ Minoris S. P.	12.0	16.1	0.0	324 29 14.1	-35.2	.....	.....	.....	-0 42.5	55.3	.....	+88 27 1.6
	(g) Jupiter South L. ....	8.0	12.1	+0.1	58 35 10.1	+ 0.3	.....	.....	.....	+1 36.8	.....	.....	- 2 35 52.4
	(f) Jupiter North L. ....	27.4	31.7	+0.1	58 34 29.7	- 0.3	.....	.....	.....	+1 36.8	.....	.....	- 2 35 11.4
	Pallas .....	55.8	61.1	-0.1	34 1 58.3	.....	.....	.....	.....	+0 40.0	.....	.....	+21 58 16.5
	Ceres .....	21.5	24.9	+0.1	47 48 23.4	.....	.....	.....	.....	+1 5.4	.....	.....	+ 8 11 26.0
	(p) $\alpha$ Ursæ Minoris S. P.	39.0	43.1	0.0	324 28 41.1	- 0.4	.....	.....	.....	-0 42.5	.....	.....	+88 27 3.4
	(q) .....	30.2	34.9	0.0	324 29 32.6	-53.4	39.7	29.87	43.0	-0 42.5	.....	.....	+88 27 1.9
	(r) Moon North L. ....	20.6	25.0	+0.1	72 32 22.8	- 6.8	.....	.....	.....	+3 6.4	.....	54.9	-16 34 27.5
	(s) .....	5.5	10.7	+0.1	72 32 8.1	+ 9.8	38.5	29.83	44.9	+3 6.4	.....	.....	-16 34 29.4
	$\alpha$ Aquarii .....	21.5	24.1	+0.1	57 5 22.9	.....	.....	.....	.....	+1 31.5	53.9	.....	- 1 5 59.5
	(a) $\alpha$ Ursæ Majoris .....	44.3	49.1	-0.6	353 23 46.1	+ 0.2	.....	.....	.....	-0 6.9	54.5	.....	+62 37 15.5
May 7	Mars Centre .....	23.9	28.1	+0.1	47 26 26.1	.....	44.0	29.72	48.1	+1 3.6	.....	.....	+ 8 33 25.2
	$\delta$ Leonis .....	59.0	64.8	0.0	34 36 1.9	.....	.....	.....	.....	+0 40.3	55.7	.....	+21 24 12.7
	$\beta$ Leonis .....	52.0	57.1	0.0	40 31 54.5	.....	44.0	29.72	47.4	+0 50.0	55.4	.....	+15 28 10.4
	$\alpha$ Ursæ Majoris .....	43.8	49.0	-0.6	353 23 45.8	.....	.....	.....	.....	-0 7.0	54.1	54.4	+62 37 15.6
May 9	Mars Centre .....	44.0	46.9	+0.1	47 38 45.6	.....	39.7	29.86	43.9	+1 5.0	.....	.....	+ 8 21 3.8
	$\delta$ Leonis .....	58.2	63.0	0.0	34 36 0.6	.....	.....	.....	.....	+0 40.9	55.2	.....	+21 24 12.9
	$\delta$ Hydræ & Crateris...	56.1	58.9	+0.1	69 52 57.7	.....	.....	.....	.....	+2 40.6	54.8	.....	-13 54 43.9
	(a) At Wire IV.												
	(b) At 13 <sup>h</sup> 11 <sup>m</sup> 12 <sup>s</sup> .												
	(c) At 13 <sup>h</sup> 39 <sup>m</sup> 54 <sup>s</sup> .												
	(d) At 13 <sup>h</sup> 41 <sup>m</sup> 25 <sup>s</sup> ; both limbs enlightened.												
	(e) 1 <sup>m</sup> after transit.												
	(f) At Wire V.												
	(g) At Wire I.												
	(h) 24 <sup>s</sup> after transit.												
	(i) At 2 <sup>h</sup> 37 <sup>m</sup> 18 <sup>s</sup> .												
	(k) 15 <sup>s</sup> after transit.												
	(l) At 12 <sup>h</sup> 33 <sup>m</sup> 0 <sup>s</sup> .												
	(m) At 13 <sup>h</sup> 6 <sup>m</sup> 0 <sup>s</sup> .												
	(n) 30 <sup>s</sup> after transit.												
	(o) At 12 <sup>h</sup> 35 <sup>m</sup> 50 <sup>s</sup> .												
	(p) At 13 <sup>h</sup> 4 <sup>m</sup> 20 <sup>s</sup> .												
	(q) At 13 <sup>h</sup> 33 <sup>m</sup> 20 <sup>s</sup> .												
	(r) Faint: at 21 <sup>h</sup> 48 <sup>m</sup> 51 <sup>s</sup> .												
	(s) Faint: at 21 <sup>h</sup> 50 <sup>m</sup> 6 <sup>s</sup> .												



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
May 9	(a) $\alpha$ Ursæ Minoris S. P.	14.5	19.0	0.0	324 29 16.8	-38.8	.....	.....	.....	-0 42.7	53.6	54.4	+88 27 0.9
	(b) Jupiter North L.	16.0	...	+0.1	58 29 18.0	+ 0.3	.....	.....	.....	+1 36.8	.....	.....	- 2 30 0.7
	(c) Jupiter South L.	57.3	61.1	+0.1	58 29 59.3	- 0.3	38.7	29.88	43.0	+1 36.8	.....	.....	- 2 30 41.4
	(d) Pallas .....	30.9	34.0	-0.1	33 47 32.3	0.0	.....	.....	.....	+0 39.8	.....	.....	+22 12 42.3
	Ceres .....	31.0	34.4	+0.1	47 56 32.8	.....	.....	.....	.....	+1 5.9	.....	.....	+ 8 3 15.7
	$\alpha$ Ursæ Minoris S. P.	36.0	39.2	0.0	324 28 37.6	.....	.....	.....	.....	-0 42.7	.....	.....	+88 27 0.5
	(e) .....	18.0	22.9	0.0	324 29 20.5	-44.1	38.2	29.89	43.0	-0 42.7	.....	.....	+88 26 59.3
May 10	$\alpha$ Tauri .....	10.4	16.1	0.0	39 49 13.3	.....	44.8	29.97	45.9	+0 49.1	56.5	55.5	+16 10 53.1
	$\alpha$ Aurigæ .....	56.3	61.2	-0.4	10 10 58.3	.....	.....	.....	.....	+0 10.5	54.6	.....	+45 49 46.7
	$\beta$ Tauri .....	21.0	26.0	-0.1	27 32 23.3	.....	.....	.....	.....	+0 30.7	55.5	.....	+28 28 1.5
	(b) Venus North L.	54.5	...	-0.1	31 4 57.1	+ 0.5	.....	.....	.....	+0 35.5	.....	.....	+24 55 22.4
	Venus South L.	7.7	13.2	-0.1	31 5 10.3	.....	44.1	29.95	45.8	+0 35.5	.....	.....	+24 55 9.7
	$\beta$ Ursæ Majoris .....	7.5	13.5	-0.6	358 46 9.9	.....	41.9	30.00	44.3	-0 1.3	.....	.....	+57 14 46.9
May 11	(f) Sun North L. .... *	39.2	42.4	0.0	37 57 40.7	- 0.3	.....	.....	.....	+0 45.6	.....	54.8	+18 2 28.8
	(g) Sun South L. ....	18.7	23.9	0.0	38 29 21.3	+ 0.5	47.0	29.89	46.0	+0 46.5	.....	.....	+17 30 46.5
	(b) Venus South L. ....	39.2	...	-0.1	30 59 40.5	+ 0.5	.....	.....	.....	+0 34.7	.....	.....	+25 0 39.1
	Venus North L. ....	25.6	28.3	-0.1	30 59 26.9	.....	51.8	29.84	49.5	+0 34.7	.....	.....	+25 0 53.2
	$\alpha$ Canis Minoris .....	44.9	50.5	+0.1	50 21 47.7	.....	53.9	29.82	51.8	+1 9.3	54.6	.....	+ 5 37 57.8
	$\beta$ Leonis .....	52.4	57.0	0.0	40 31 54.6	.....	.....	.....	.....	+0 50.1	56.0	.....	+15 28 10.1
	$\gamma$ Ursæ Majoris .....	24.0	29.3	-0.5	1 25 26.1	.....	45.0	29.87	47.5	+0 1.4	54.7	.....	+54 35 27.3
	(h) $\alpha$ Ursæ Minoris S. P.	12.9	19.1	0.0	324 29 16.0	-38.1	.....	.....	.....	-0 42.2	53.8	.....	+88 27 0.9
	(b) Jupiter South L.	48.0	51.7	+0.1	58 26 49.9	+ 0.3	.....	.....	.....	+1 35.4	.....	.....	- 2 27 30.8
	(c) Jupiter North L.	7.5	12.9	+0.1	58 26 10.3	- 0.3	43.7	29.85	46.5	+1 35.4	.....	.....	- 2 26 50.6
	Pallas .....	41.0	46.0	-0.1	33 39 43.4	.....	.....	.....	.....	+0 39.2	.....	.....	+22 20 32.2
	Ceres .....	54.0	59.2	+0.1	48 2 56.8	.....	.....	.....	.....	+1 5.4	.....	.....	+ 7 56 52.6
	$\alpha$ Ursæ Minoris S. P.	32.7	38.0	0.0	324 28 35.4	.....	.....	.....	.....	-0 42.2	.....	.....	+88 26 58.4
	(i) .....	20.9	26.2	0.0	324 29 23.6	-47.0	43.0	29.87	46.0	-0 42.2	.....	.....	+88 26 59.6
May 13	Mars Centre .....	50.0	54.2	+0.1	48 5 52.2	.....	.....	.....	.....	+1 5.4	.....	54.7	+ 7 53 57.1
	$\delta$ Leonis .....	57.8	63.5	0.0	34 36 0.6	.....	37.5	29.44	45.2	+0 40.5	55.2	.....	+21 24 13.6
	$\delta$ Hydræ & Crateris ..	57.5	60.7	+0.1	69 52 59.3	.....	.....	.....	.....	+2 39.0	54.8	.....	-13 54 43.6
	$\beta$ Leonis .....	51.0	54.0	0.0	40 31 52.4	.....	.....	.....	.....	+0 50.3	54.2	.....	+15 28 12.0
	(k) $\alpha$ Ursæ Minoris S. P.	22.9	26.2	0.0	324 29 24.6	-47.8	35.6	29.45	40.8	-0 42.4	54.7	.....	+88 26 59.7
	Jupiter North L.	13.1	16.1	+0.1	58 23 14.8	.....	.....	.....	.....	+1 35.7	.....	.....	- 2 23 55.8
	Pallas .....	16.9	20.1	-0.1	33 33 18.5	.....	.....	.....	.....	+0 39.2	.....	.....	+22 26 57.0
	Ceres .....	3.8	7.3	+0.1	48 10 5.6	.....	.....	.....	.....	+1 5.9	.....	.....	+ 7 49 43.2
	$\alpha$ Ursæ Minoris S. P.	36.3	40.0	0.0	324 28 38.2	.....	.....	.....	.....	-0 42.4	.....	.....	+88 27 1.1
	(l) .....	13.4	19.2	0.0	324 29 16.3	-39.4	34.8	29.44	39.3	-0 42.4	.....	.....	+88 26 59.8
	Groomb. 642 S. P. ...	1.0	6.4	+0.1	322 9 3.8	.....	.....	.....	.....	-0 46.2	.....	.....	+86 7 22.9
	A. S. C. 1752 .....	45.2	46.1	+0.1	72 39 45.8	.....	33.7	29.43	37.0	+3 7.5	.....	.....	-16 41 58.6
	Groombridge 2283 .....	35.8	40.9	-0.1	328 11 38.2	.....	.....	.....	.....	-0 36.9	.....	.....	+87 49 53.4
	Groomb. 750 S. P. ...	53.8	58.5	+0.1	321 8 56.3	.....	.....	.....	.....	-0 47.9	.....	.....	+85 7 13.7
	Saturn Centre .....	7.9	10.0	+0.1	75 41 9.0	.....	33.4	29.42	36.3	+3 48.0	.....	.....	-19 44 2.3
May 14	(m) Groomb. 750 S. P. ...	51.8	57.0	+0.1	321 8 54.5	- 0.1	.....	.....	.....	-0 47.5	.....	56.8	+85 7 10.1
	$\zeta$ Ursæ Minoris .....	20.8	25.0	-0.3	337 44 22.6	.....	33.0	29.12	40.9	-0 24.2	56.8	.....	+78 16 58.4
	$\delta$ Ophiuchi .....	59.9	62.2	+0.1	59 16 1.1	.....	.....	.....	.....	+1 38.4	56.3	.....	- 3 16 42.7
	$\eta$ Draconis .....	29.8	33.7	-0.6	354 8 31.2	.....	.....	.....	.....	-0 6.1	57.2	.....	+61 52 31.7
	Saturn Centre .....	31.5	33.2	+0.1	75 40 32.4	.....	33.0	29.11	39.1	+3 45.6	.....	.....	-19 43 21.2
May 16	(c) $\alpha$ Canis Minoris .....	47.8	52.0	+0.1	50 21 49.9	- 0.3	.....	.....	.....	+1 8.3	55.7	55.2	+ 5 37 57.3
	(d) $\beta$ Geminorum .....	43.7	49.0	-0.1	27 35 46.2	- 0.1	49.8	29.13	47.8	+0 29.6	56.1	.....	+28 24 39.5
	$\gamma$ Ursæ Majoris .....	23.9	28.5	-0.5	1 25 25.7	.....	42.7	29.27	44.4	+0 1.4	55.0	.....	+54 35 28.1
	(b) Jupiter South L.	4.2	7.7	+0.1	58 20 6.0	+ 0.3	.....	.....	.....	+1 33.8	.....	.....	- 2 20 44.9
	(e) Jupiter North L.	23.8	27.2	+0.1	58 19 25.6	- 0.3	40.9	29.29	42.5	+1 33.8	.....	.....	- 2 20 3.9
	Pallas .....	7.9	12.4	-0.1	33 26 10.0	.....	.....	.....	.....	+0 38.3	.....	.....	+22 34 6.9
(a) At 12 <sup>h</sup> 34 <sup>m</sup> 45 <sup>s</sup> .		(d) At Wire IV.		(g) At 3 <sup>h</sup> 12 <sup>m</sup> 10 <sup>s</sup> .		(k) At 12 <sup>h</sup> 32 <sup>m</sup> 10 <sup>s</sup> .							
(b) At Wire I.		(e) At 13 <sup>h</sup> 30 <sup>m</sup> 40 <sup>s</sup> .		(h) At 12 <sup>h</sup> 35 <sup>m</sup> 10 <sup>s</sup> .		(l) At 13 <sup>h</sup> 29 <sup>m</sup> 20 <sup>s</sup> .							
(c) At Wire V.		(f) At 3 <sup>h</sup> 10 <sup>m</sup> 26 <sup>s</sup> .		(i) At 13 <sup>h</sup> 31 <sup>m</sup> 45 <sup>s</sup> .		(m) At 15 <sup>h</sup> 47 <sup>m</sup> 15 <sup>s</sup> .							



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
May 16	Ceres.....	9.0	13.0	+0.1	48 22 11.0	.....	.....	.....	.....	+1 5.2	.....	55.2	+ 7 37 39.0
	$\alpha$ Ursæ Minoris S. P.	33.3	37.4	0.0	324 28 35.4	.....	.....	.....	.....	-0 41.6	54.2	.....	+88 26 58.6
	Groomb. 642 S. P. ...	59.0	65.0	+0.1	322 9 2.1	.....	39.0	29.33	40.7	-0 45.5	.....	.....	+86 7 21.4
	$\tau^2$ Serpentis.....	57.0	61.4	0.0	39 20 59.2	.....	.....	.....	.....	+0 47.9	.....	.....	+16 39 8.1
	Groombridge 2283 ...	33.8	38.9	-0.1	328 11 36.2	.....	.....	.....	.....	-0 36.4	.....	.....	+87 49 55.4
	Groomb. 750 S. P. ...	50.0	56.4	+0.1	321 8 53.3	.....	.....	.....	.....	-0 47.2	.....	.....	+85 7 10.1
	Saturn Centre .....	13.6	16.1	+0.1	75 39 15.0	.....	38.9	29.35	40.2	+3 44.2	.....	.....	-19 42 4.0
May 17	Sun South L.....	37.3	41.1	0.0	37 1 39.1	.....	51.5	29.45	48.2	+0 43.0	.....	56.1	+18 58 34.0
	Jupiter Centre.....	35.0	38.8	+0.1	58 18 37.0	.....	47.2	29.45	47.4	+1 33.0	.....	.....	- 2 19 13.9
	(a) $\alpha$ Ursæ Minoris S. P.	51.4	56.5	0.0	324 28 54.0	-17.2	.....	.....	.....	-0 41.3	56.1	.....	.....
May 19	$\alpha$ Hydræ .....	54.8	59.4	+0.1	63 56 57.1	.....	.....	.....	.....	+1 56.9	55.2	55.2	- 7 57 58.8
	(b) $\theta$ Ursæ Majoris .....	13.0	19.4	-0.5	3 36 15.7	+ 0.1	53.0	29.76	51.8	+0 3.6	55.5	.....	+52 24 35.8
	$\epsilon$ Leonis .....	30.8	35.0	-0.1	31 29 32.8	.....	.....	.....	.....	+0 35.2	54.8	.....	+24 30 47.2
	(c) Moon North L. ....	8.3	14.2	0.0	39 44 11.3	+ 3.1	.....	.....	.....	+0 47.7	.....	.....	+16 15 53.1
	(d) .....	22.4	27.5	0.0	39 44 25.0	-12.4	.....	.....	.....	+0 47.7	.....	.....	+16 15 54.9
	Mercury Centre.....	36.0	38.8	+0.1	46 13 37.5	.....	52.4	29.92	51.3	+1 0.3	.....	54.3	+ 9 46 16.5
May 20	(c) Sun North L.....	28.6	33.0	0.0	35 50 30.8	+ 0.8	53.8	29.92	52.9	+0 41.6	.....	.....	+20 9 41.1
	Jupiter Centre.....	31.9	35.1	+0.1	58 15 33.6	.....	49.8	29.95	50.5	+1 33.8	.....	.....	- 2 16 13.1
	$\alpha$ Ursæ Minoris S. P.	32.6	37.5	0.0	324 28 35.1	.....	.....	.....	.....	-0 41.8	54.4	.....	+88 26 59.0
	$\alpha$ Virginis.....	4.5	9.0	+0.1	66 18 6.9	.....	.....	.....	.....	+2 12.1	54.7	.....	-10 19 24.7
	(f) $\zeta$ Ursæ Majoris.....	47.5	52.5	-0.5	0 14 49.5	+ 1.3	.....	.....	.....	+0 0.2	53.6	.....	+55 46 3.3
	$\eta$ Ursæ Majoris.....	42.8	47.0	-0.5	5 53 44.4	.....	48.0	29.94	48.8	+0 6.0	54.5	.....	+50 7 3.9
May 21	(g) Moon North L. ....	3.4	10.0	+0.1	51 1 6.8	+ 2.0	.....	.....	.....	+1 11.8	.....	55.6	+ 4 58 35.0
	(h) .....	19.2	24.9	+0.1	51 1 22.1	-14.8	46.9	29.77	49.4	+1 11.8	.....	.....	+ 4 58 36.5
	$\beta$ Leonis .....	52.8	56.8	0.0	40 31 54.7	.....	.....	.....	.....	+0 49.8	56.6	.....	+15 28 11.1
	(i) $\alpha$ Ursæ Minoris S. P.	52.2	58.0	0.0	324 28 55.1	-19.8	45.2	29.78	48.1	-0 41.9	54.7	.....	+88 26 57.8
May 22	(k) Venus South L. ....	38.5	.....	-0.1	30 45 40.0	+ 0.3	.....	.....	.....	+0 34.7	.....	54.8	+25 14 39.8
	(b) Venus North L. ....	25.5	28.8	-0.1	30 45 27.0	- 0.1	48.9	29.91	49.4	+0 34.7	.....	.....	+25 14 53.2
	(l) $\alpha^2$ Libræ.....	24.3	27.8	+0.1	71 20 26.1	- 0.5	43.0	29.93	47.4	+2 52.9	54.8	.....	-15 22 23.7
	$\beta$ Ursæ Minoris .....	30.6	35.0	-0.4	341 12 32.5	.....	.....	.....	.....	-0 20.2	53.9	.....	+74 48 42.5
	$\beta$ Libræ .....	7.6	11.4	+0.1	64 46 9.6	.....	.....	.....	.....	+2 4.6	55.8	.....	- 8 47 19.4
	Groomb. 642 S. P.....	58.4	63.1	+0.1	322 9 0.9	.....	.....	.....	.....	-0 46.0	.....	.....	+86 7 20.1
	Groombridge 2283 ...	32.7	38.0	-0.1	328 11 35.2	.....	.....	.....	.....	-0 36.8	.....	.....	+87 49 56.4
	Groomb. 750 S. P. ...	49.0	55.5	+0.1	321 8 52.4	.....	.....	.....	.....	-0 47.7	.....	.....	+85 7 9.9
	Saturn Centre .....	11.5	15.1	+0.1	75 35 13.4	.....	42.8	29.88	44.6	+3 45.3	.....	.....	-19 38 3.9
	Mercury Centre.....	51.2	55.5	+0.1	45 30 53.4	.....	50.5	29.62	49.6	+0 58.5	.....	54.6	+10 29 2.7
May 23	(m) Moon North L. ....	56.0	60.4	+0.1	62 42 58.4	+ 6.1	.....	.....	.....	+1 51.7	.....	.....	- 6 44 1.6
	(n) .....	14.0	17.9	+0.1	62 43 16.1	-12.5	47.2	29.60	50.0	+1 51.7	.....	.....	- 6 44 0.7
	Ceres .....	9.6	14.3	+0.1	48 56 12.0	.....	.....	.....	.....	+1 6.4	.....	.....	+ 7 3 36.2
	$\theta$ Virginis.....	4.4	8.2	+0.1	60 40 6.4	.....	.....	.....	.....	+1 42.7	.....	.....	- 4 40 54.5
	(o) $\alpha$ Ursæ Minoris S. P.	31.4	36.3	0.0	324 28 33.9	- 0.5	.....	.....	.....	-0 41.5	53.5	.....	+88 26 57.3
	$\alpha$ Virginis .....	5.5	9.9	+0.1	66 18 7.9	.....	.....	.....	.....	+2 11.3	54.9	.....	-10 19 24.6
	$\eta$ Ursæ Majoris.....	43.8	46.6	-0.5	5 53 44.7	.....	.....	.....	.....	+0 6.0	55.4	.....	+50 7 3.9
	$\eta$ Bootis.....	53.5	57.9	0.0	36 47 55.8	.....	45.2	29.60	47.0	+0 43.5	56.4	.....	+19 12 15.3
	Mercury Centre.....	5.8	9.2	+0.1	45 13 7.7	.....	46.5	29.75	48.0	+0 58.6	.....	54.8	+10 46 48.5
May 24	(l) Sun South L. ....	9.9	14.6	0.0	35 34 12.3	+ 0.2	47.8	29.75	48.4	+0 41.5	.....	.....	+20 26 0.8
May 25	Sun North L.....	31.1	35.9	0.0	34 51 33.5	.....	50.5	29.81	49.4	+0 40.3	.....	.....	+21 8 41.0
May 27	(p) Sun South L. ....	58.2	62.0	0.0	35 2 0.0	+ 0.3	.....	.....	.....	+0 40.0	.....	54.9	+20 58 14.6
	(l) Sun North L. ....	20.5	25.5	0.0	34 30 23.0	+ 0.2	57.5	29.87	55.6	+0 39.3	.....	.....	+21 29 52.4
(a) At 12 <sup>h</sup> 43 <sup>m</sup> 40 <sup>s</sup> .      (d) At 9 <sup>h</sup> 42 <sup>m</sup> 59 <sup>s</sup> .      (g) At 11 <sup>h</sup> 14 <sup>m</sup> 48 <sup>s</sup> .      (k) At Wire II.      (n) At 12 <sup>h</sup> 42 <sup>m</sup> 18 <sup>s</sup> .													
(b) At Wire IV.      (e) At 3 <sup>h</sup> 47 <sup>m</sup> 50 <sup>s</sup> .      (h) At 11 <sup>h</sup> 15 <sup>m</sup> 57 <sup>s</sup> .      (l) At Wire V.      (o) At 13 <sup>h</sup> 5 <sup>m</sup> 6 <sup>s</sup> .													
(c) At 9 <sup>h</sup> 41 <sup>m</sup> 46 <sup>s</sup> .      (f) At 13 <sup>h</sup> 19 <sup>m</sup> 30 <sup>s</sup> .      (i) At 13 <sup>h</sup> 21 <sup>m</sup> 20 <sup>s</sup> .      (m) At 12 <sup>h</sup> 41 <sup>m</sup> 0 <sup>s</sup> .      (p) At Wire I.													



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.	
		I.	II.		observed.	adopted.										
May 27	$\alpha$ Aurigæ .....	58.5	64.0	-0.4	10	11	0.8	.....	59.4	.....	.....	+0 10.2	54.5	54.9	+45 49 43.9	
	Groomb. 642 S. P. ....	54.9	61.8	+0.1	322	8	58.5	.....	.....	.....	-0 45.1	.....	.....	+86 7 18.5		
	(a) A. S. C. 1752 .....	49.1	53.5	+0.1	72	39	51.4	-0.6	.....	.....	.....	+3 2.7	.....	.....	-16 41 58.6	
	$\alpha$ Coronæ borealis ....	54.2	62.0	-0.1	28	44	58.0	.....	53.0	29.93	53.8	+0 31.7	55.1	.....	+27 15 25.2	
	Groombridge 2283 ....	28.5	34.9	-0.1	328	11	31.6	.....	.....	.....	.....	-0 36.0	.....	.....	+87 49 59.3	
	$\alpha$ Serpentis.....	48.5	54.1	+0.1	49	3	51.4	.....	.....	.....	.....	+1 6.5	55.2	.....	+6 55 57.0	
	(b) Groomb. 750 S. P. ....	45.3	53.0	+0.1	321	8	49.3	-1.1	.....	.....	.....	-0 46.7	.....	.....	+85 7 6.6	
	(c) Moon North L. ....	6.2	10.8	+0.1	81	28	8.7	+5.7	.....	.....	.....	+6 6.4	.....	.....	-25 33 25.9	
	(d) Moon South L. ....	48.2	51.6	+0.1	81	57	50.1	-9.1	.....	.....	.....	+6 27.0	.....	.....	-26 3 13.1	
	(e) Saturn Centre.....	51.5	58.2	+0.1	75	31	54.9	-0.8	52.2	29.93	53.2	+3 40.2	.....	.....	-19 34 39.4	
May 28	(f) Sun North L. ....	21.0	27.0	0.0	34	20	24.0	+0.3	.....	.....	.....	+0 39.3	.....	56.5	+21 39 52.9	
	(a) Sun South L. ....	56.0	62.8	0.0	34	51	59.3	+0.2	56.5	29.99	55.5	+0 40.0	.....	.....	+21 8 17.0	
	(g) $\alpha$ Aurigæ.....	59.1	65.0	-0.4	10	11	1.6	0.0	.....	.....	.....	+0 10.3	55.3	.....	+45 49 44.6	
	$\alpha$ Bootis .....	58.0	64.0	0.0	35	59	1.0	.....	53.0	30.01	54.1	+0 42.1	56.4	.....	+20 1 13.4	
	$\epsilon$ Bootis .....	11.0	18.1	-0.1	28	15	14.4	.....	.....	.....	.....	+0 31.1	57.9	.....	+27 45 11.0	
	(h) Groombridge 2283 ....	29.2	35.8	-0.1	328	11	32.4	+0.4	.....	.....	.....	-0 36.1	.....	.....	+87 49 59.8	
	Mercury Centre.....	58.6	63.2	0.0	43	22	0.8	.....	50.9	30.05	53.3	+0 55.0	.....	55.5	+12 37 59.7	
May 29	(f) Sun South L. ....	18.0	24.9	0.0	34	42	21.4	+0.4	.....	.....	.....	+0 40.3	.....	.....	+21 17 53.4	
	(a) Sun North L. ....	42.5	48.0	-0.1	34	10	45.1	+0.2	51.9	30.05	52.6	+0 39.5	.....	.....	+21 49 30.7	
	$\alpha$ Aurigæ.....	59.5	64.8	-0.4	10	11	1.7	.....	.....	.....	.....	+0 10.4	55.4	.....	+45 49 43.4	
	Venus Centre .....	41.8	46.1	-0.1	31	20	43.8	.....	52.0	30.04	52.6	+0 35.4	.....	.....	+24 39 36.3	
	$\alpha$ Canis Minoris.....	45.2	50.8	+0.1	50	21	48.0	.....	.....	.....	.....	+1 10.1	56.6	.....	+5 37 57.4	
	$\beta$ Geminorum .....	41.2	47.7	-0.1	27	35	44.3	.....	.....	.....	.....	+0 30.4	54.8	.....	+28 24 40.8	
	$\alpha$ Ursæ Minoris S. P. ....	32.1	37.8	0.0	324	28	35.0	.....	46.0	30.03	49.8	-0 42.2	55.2	.....	+88 26 57.3	
	Mercury Centre.....	59.0	63.6	0.0	42	56	1.3	.....	46.8	30.03	49.8	+0 54.6	.....	55.8	+13 3 59.9	
May 30	Sun North L. ....	25.2	30.9	-0.1	34	1	27.9	.....	49.0	30.01	49.5	+0 39.4	.....	.....	+21 58 48.5	
	Venus Centre .....	23.8	28.5	-0.1	31	28	26.1	.....	49.8	29.99	50.5	+0 35.7	.....	.....	+24 31 54.0	
	$\alpha$ Canis Minoris.....	45.1	50.1	+0.1	50	21	47.6	.....	.....	.....	.....	+1 10.3	56.4	.....	+5 37 57.9	
	$\beta$ Geminorum .....	41.9	47.9	-0.1	27	35	44.8	.....	.....	.....	.....	+0 30.5	55.3	.....	+28 24 40.5	
May 31	(i) Venus Centre .....	48.9	53.0	-0.1	31	36	50.8	-0.2	48.0	29.90	48.5	+0 35.9	.....	55.7	+24 23 29.2	
	(k) $\alpha$ Canis Minoris.....	44.9	49.9	+0.1	50	21	47.4	+0.2	.....	.....	.....	+1 10.4	56.6	.....	+5 37 57.7	
	$\beta$ Geminorum .....	43.4	49.2	-0.1	27	35	46.2	.....	.....	.....	.....	+0 30.5	56.7	.....	+28 24 39.0	
	(i) Jupiter Centre .....	50.9	54.9	+0.1	58	9	53.0	-0.2	43.9	29.86	46.6	+1 34.4	.....	.....	-2 10 31.5	
	(l) $\alpha$ Ursæ Minoris S. P. ....	32.9	37.9	0.0	324	28	35.4	-1.1	.....	.....	.....	-0 42.2	54.7	.....	+88 26 56.4	
	$\zeta$ Ursæ Majoris.....	47.2	53.5	-0.5	0	14	49.9	.....	.....	.....	.....	+0 0.2	54.9	.....	+55 46 5.6	
	Mercury Centre.....	52.8	57.9	0.0	42	0	55.3	.....	46.0	29.80	48.0	+0 52.6	.....	55.7	+13 59 7.8	
June 1	(m) Sun South L. ....	35.3	39.0	-0.1	34	15	37.0	+0.3	.....	.....	.....	+0 39.7	.....	.....	+21 44 38.7	
	(n) Sun North L. ....	0.7	5.3	-0.1	33	44	2.9	+0.4	46.9	29.77	47.2	+0 38.9	.....	.....	+22 16 13.5	
	$\alpha$ Aurigæ.....	59.8	64.8	-0.4	10	11	1.9	.....	.....	.....	.....	+0 10.4	55.2	.....	+45 49 43.4	
	$\alpha$ Orionis .....	26.9	30.5	+0.1	48	37	28.7	.....	47.2	29.77	47.6	+1 6.0	56.1	.....	+7 22 21.0	
	$\theta$ Ursæ Majoris.....	14.2	21.1	-0.5	3	36	17.1	.....	46.0	29.73	48.4	+0 3.6	56.3	.....	+52 24 35.0	
	Jupiter Centre.....	45.8	50.0	+0.1	58	9	48.0	.....	42.6	29.73	45.9	+1 34.3	.....	.....	-2 10 26.6	
	$\alpha$ Ursæ Minoris S. P. ....	32.0	37.0	0.0	324	28	34.5	.....	.....	.....	.....	-0 42.1	55.2	.....	+88 26 56.7	
	Groomb. 642 S. P. ....	56.0	63.2	+0.1	322	8	59.7	.....	40.9	29.74	43.7	-0 46.0	.....	.....	+86 7 18.0	
June 3	$\alpha$ Canis Minoris.....	46.9	51.9	+0.1	50	21	49.4	.....	.....	.....	.....	+1 9.1	57.3	56.4	+5 37 57.9	
	Venus Centre .....	51.9	55.8	-0.1	32	5	53.7	.....	.....	.....	.....	+0 35.9	.....	.....	+23 54 26.8	
	$\beta$ Geminorum .....	42.1	48.7	-0.1	27	35	45.3	.....	47.9	29.36	47.9	+0 30.0	55.2	.....	+28 24 41.1	
	$\epsilon$ Leonis.....	32.0	37.1	-0.1	31	29	34.5	.....	50.8	29.34	50.0	+0 34.9	56.6	.....	+24 30 47.0	
June 5	(f) Sun North L. ....	47.6	53.1	-0.1	33	13	50.3	+0.4	.....	.....	.....	+0 36.9	.....	54.5	+22 46 26.9	
(a) At Wire V.		tion for defect of illumina- tion 2".5.							(f) At Wire I.				(h) At Wire II.			
(b) At 15 <sup>h</sup> 46 <sup>m</sup> 40 <sup>s</sup> .									(g) 15' after transit.				(l) At 13 <sup>h</sup> 6 <sup>m</sup> 35 <sup>s</sup> .			
(c) At 15 <sup>h</sup> 50 <sup>m</sup> 40 <sup>s</sup> : defi- cient limb; Correc-		(d) At 15 <sup>h</sup> 52 <sup>m</sup> 30 <sup>s</sup> .							(h) At 15 <sup>h</sup> 36 <sup>m</sup> 50 <sup>s</sup> .				(m) 30' before transit.			
		(e) 48' after transit.							(i) At Wire IV.				(n) At 4 <sup>h</sup> 36 <sup>m</sup> 10 <sup>s</sup> .			

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
June 5	(a) Sun South L. ....	21.0	26.0	-0.1	33 45 23.4	+ 0.4	57.9	29.48	57.0	+0 37.6	.....	54.5	+22 14 53.1
	α Aurigæ .....	59.0	64.3	-0.4	10 11 1.2	.....	.....	.....	.....	+0 10.1	53.7	.....	+45 49 43.2
	α Orionis ..... *	26.8	31.9	+0.1	48 37 29.5	.....	58.8	.....	.....	+1 3.7	54.9	.....	+ 7 22 21.3
	Venus Centre .....	21.3	27.8	-0.1	32 28 24.5	.....	60.9	29.50	60.0	+0 35.6	.....	.....	+23 31 54.4
	(a) α Leonis .....	55.2	62.8	0.0	43 14 59.0	- 0.1	61.0	29.51	60.0	+0 52.6	54.9	.....	+12 45 3.0
June 6	α Bootis .....	56.3	63.3	0.0	35 58 59.8	.....	56.8	29.48	56.3	+0 41.0	55.4	56.0	+20 1 15.2
	(b) ζ Ursæ Minoris.....	11.2	18.5	-0.3	337 44 14.6	+ 0.1	55.8	.....	.....	-0 23.3	56.7	.....	+78 17 4.6
June 7	(c) α Leonis .....	57.0	62.5	0.0	43 14 59.8	- 0.2	61.0	29.21	58.8	+0 52.1	55.2	55.2	.....
	Mercury Centre.....	37.2	41.5	0.0	38 26 39.3	.....	61.9	29.37	58.0	+0 44.1	.....	55.3	+17 33 31.9
June 8	(d) Sun South L. ....	43.5	49.4	-0.1	33 26 46.3	+ 1.0	62.6	29.39	59.9	+0 36.7	.....	.....	+22 33 31.3
	θ Ursæ Majoris.....	12.5	20.1	-0.5	3 36 15.8	.....	63.0	.....	.....	+0 3.5	54.4	.....	+52 24 36.0
	α Serpentis .....	48.5	54.8	+0.1	49 3 51.8	.....	55.0	29.38	56.8	+1 5.0	55.6	.....	+ 6 55 58.5
	ζ Ursæ Minoris.....	10.6	16.4	-0.3	337 44 13.2	.....	.....	.....	.....	-0 23.2	55.9	.....	+78 17 5.3
	Saturn Centre .....	6.5	12.0	+0.1	75 24 9.4	.....	54.7	29.39	56.6	+3 33.2	.....	.....	-19 26 47.3
June 10	α Virginis.....	9.8	13.2	+0.1	66 18 11.7	.....	56.0	29.56	56.3	+2 8.4	56.3	55.2	-10 19 24.9
	η Ursæ Majoris.....	38.9	43.0	-0.5	5 53 40.5	.....	.....	.....	.....	+0 5.8	54.5	.....	+50 7 8.9
	β Ursæ Minoris.....	24.0	29.7	-0.4	341 12 26.4	.....	56.9	29.58	56.8	-0 19.4	53.5	.....	+74 48 48.2
	δ Ophiuchi .....	1.0	4.7	+0.1	59 16 2.9	.....	57.0	29.57	56.8	+1 34.9	56.8	.....	- 3 16 42.6
	η Draconis.....	17.9	23.1	-0.6	354 8 20.0	.....	.....	.....	.....	-0 5.9	54.7	.....	+61 52 41.1
June 11	(e) Sun North L.....	17.2	22.9	-0.1	32 40 19.9	+ 0.5	.....	.....	.....	+0 36.5	.....	55.0	+23 19 58.1
	(f) Sun South L.....	45.0	50.8	-0.1	33 11 47.7	+ 1.4	57.8	29.78	57.3	+0 37.2	.....	.....	+22 48 28.7
	β Geminorum .....	42.9	48.6	-0.1	27 35 45.6	.....	58.0	29.82	57.7	+0 29.8	55.0	.....	.....
	Venus Centre .....	15.2	20.1	-0.1	33 50 17.5	.....	57.8	29.83	57.8	+0 38.2	.....	.....	+22 9 59.3
June 12	(g) α Ursæ Minoris S. P.	40.4	45.9	0.0	324 28 43.2	-10.0	47.1	29.83	53.4	-0 41.8	55.2	54.3	+88 26 57.1
	η Ursæ Majoris.....	38.7	41.8	-0.5	5 53 39.8	.....	.....	.....	.....	+0 6.0	54.3	.....	+50 7 8.5
	(h) η Bootis.....	48.8	52.0	0.0	36 47 50.5	- 0.1	.....	.....	.....	+0 43.6	53.7	.....	+19 12 20.3
	α Bootis .....	53.9	58.5	0.0	35 58 56.2	.....	46.6	29.83	50.5	+0 42.4	54.1	.....	+20 1 15.7
	Saturn Centre .....	29.1	33.2	+0.1	75 21 31.2	.....	45.5	29.83	49.5	+3 39.9	.....	.....	-19 24 16.8
	Mercury Centre .....	28.6	32.2	0.0	35 49 30.4	.....	50.0	29.81	51.8	+0 41.8	.....	55.2	+20 10 43.0
	α Tauri .....	8.8	13.5	0.0	39 49 11.2	.....	.....	.....	.....	+0 48.3	55.1	.....	+16 10 55.7
	α Aurigæ .....	1.0	6.5	-0.4	10 11 3.3	.....	.....	.....	.....	+0 10.4	55.1	.....	+45 49 41.5
June 13	(a) Sun North L. ....	16.2	21.4	-0.1	32 32 18.6	+ 0.3	50.1	29.81	51.7	+0 36.9	.....	.....	+23 27 59.4
	Venus Centre .....	3.5	10.0	0.0	34 22 6.7	.....	50.6	29.78	52.2	+0 39.5	.....	.....	+21 38 9.0
	Saturn Centre .....	53.5	57.5	+0.1	75 20 55.6	.....	.....	.....	.....	+3 39.3	.....	.....	-19 23 39.7
	η Draconis.....	17.4	23.4	-0.6	354 8 19.9	.....	45.8	29.78	50.0	-0 6.1	55.3	.....	+61 52 41.4
	Mercury Centre.....	31.7	36.3	0.0	35 19 34.0	.....	48.1	29.75	52.1	+0 41.1	.....	54.3	+20 40 39.2
June 14	(i) Sun South L. ....	26.5	31.9	-0.1	33 0 29.1	+ 0.8	.....	.....	.....	+0 37.6	.....	.....	+22 59 46.8
	(k) Sun North L.....	55.5	61.9	-0.1	32 28 58.6	+ 0.2	49.4	29.75	51.6	+0 36.8	.....	.....	+23 31 18.7
	α Canis Minoris.....	45.0	49.8	+0.1	50 21 47.4	.....	50.7	29.72	51.8	+1 9.5	56.5	.....	+ 5 37 57.4
	β Geminorum .....	41.5	46.9	-0.1	27 35 44.1	.....	.....	.....	.....	+0 30.1	53.6	.....	+28 24 40.1
	Venus Centre .....	48.0	53.7	0.0	34 38 50.9	.....	50.9	29.71	52.0	+0 39.8	.....	.....	+21 21 23.6
	α Bootis .....	54.6	56.8	0.0	35 58 55.7	.....	48.2	29.72	52.5	+0 42.1	53.5	.....	+20 1 16.5
	(a) ε Bootis.....	5.1	10.0	-0.1	28 15 7.4	+ 0.3	.....	.....	.....	+0 31.1	54.3	.....	+27 45 15.5
	β Ursæ Minoris.....	23.9	29.2	-0.4	341 12 26.1	.....	.....	.....	.....	-0 19.8	53.6	.....	+74 48 48.0
	Saturn Centre .....	21.1	25.7	+0.1	75 20 23.5	.....	48.7	29.72	51.9	+3 37.3	.....	.....	-19 23 6.5
	(l) α Tauri.....	9.7	14.0	0.0	39 49 11.9	- 0.1	.....	.....	.....	+0 47.5	55.0	56.0	+16 10 56.7
	Mercury Centre.....	32.5	36.4	0.0	34 50 34.4	.....	57.0	29.76	54.8	+0 39.6	.....	.....	+21 9 42.0

(a) 1<sup>m</sup> after transit.  
 (b) 45<sup>s</sup> after transit.  
 (c) 30<sup>s</sup> after transit.  
 (d) At 5<sup>h</sup> 5<sup>m</sup> 8<sup>s</sup>.

(e) At Wire I.  
 (f) At 5<sup>h</sup> 18<sup>m</sup> 5<sup>s</sup>.  
 (g) At 13<sup>h</sup> 16<sup>m</sup> 6<sup>s</sup>.  
 (h) At Wire IV.

(i) 50<sup>s</sup> before transit.  
 (k) 50<sup>s</sup> after transit.  
 (l) At Wire V.



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
June 15	(a) Sun North L. ....	58.8	64.9	-0.1	32 26 1.7	+ 0.6	.....	.....	.....	+0 36.3	.....	56.0	+23 34 17.4
	(b) Sun South L. .... *	31.4	36.3	-0.1	32 57 33.7	+ 0.2	55.2	29.77	55.4	+0 37.1	.....	.....	+23 2 45.0
	η Bootis.....	50.9	57.2	0.0	36 47 54.1	.....	51.0	29.83	55.0	+0 43.2	57.4	.....	+19 12 18.7
	α Bootis .....	54.2	60.9	0.0	35 58 57.6	.....	.....	.....	.....	+0 42.0	55.5	.....	+20 1 16.4
	Saturn Centre .....	46.5	50.1	+0.1	75 19 48.4	.....	50.5	29.87	53.8	+3 37.4	.....	.....	-19 22 29.8
June 16	α Canis Minoris .....	45.1	52.1	+0.1	50 21 48.6	.....	.....	.....	.....	+1 7.2	55.5	53.9	+ 5 37 58.1
	β Geminorum .....	43.7	51.3	-0.1	27 35 47.4	.....	71.0	29.97	65.7	+0 29.1	55.8	.....	+28 24 37.4
	ε Leonis.....	27.5	34.5	-0.1	31 29 30.9	.....	71.0	29.98	68.0	+0 34.1	52.2	.....	+24 30 48.9
	α Leonis.....	52.3	59.4	0.0	43 14 55.9	.....	.....	.....	.....	+0 52.4	52.1	.....	+12 45 5.6
	(c) Moon North L. ....	41.8	....	0.0	43 7 45.3	+17.8	.....	.....	.....	+0 52.2	.....	.....	+12 51 58.6
	(d) .....	51.5	....	0.0	43 7 55.0	+ 5.6	.....	.....	.....	+0 52.2	.....	.....	+12 52 1.1
	(e) .....	6.1	13.0	0.0	43 8 9.6	- 8.1	71.0	29.98	68.7	+0 52.2	.....	.....	+12 52 0.2
	Mercury Centre.....	3.5	8.5	-0.1	33 56 5.9	.....	60.5	29.94	60.0	+0 38.3	.....	54.8	+22 410.6
June 17	(f) Sun South L. ....	51.3	58.2	-0.1	32 52 54.7	+ 0.4	.....	.....	.....	+0 36.8	.....	.....	+23 7 22.9
	(g) Sun North L. ....	18.7	23.3	-0.1	32 21 20.8	+ 0.4	60.0	29.93	60.0	+0 36.0	.....	.....	+23 38 57.6
	α Leonis .....	55.5	61.2	0.0	43 14 58.4	.....	73.0	29.87	64.2	+0 52.0	54.2	.....	+12 45 4.4
	(h) Moon North L. ....	30.6	....	+0.1	48 56 33.8	+17.6	.....	.....	.....	+1 3.4	.....	.....	+ 7 3 0.0
	(i) .....	42.2	....	+0.1	48 56 45.4	+ 6.1	.....	.....	.....	+1 3.4	.....	.....	+ 7 2 59.9
	(k) .....	52.3	....	+0.1	48 56 55.5	- 4.0	.....	.....	.....	+1 3.4	.....	.....	+ 7 2 59.9
	(l) .....	0.5	6.8	+0.1	48 57 3.7	-12.0	72.5	29.86	66.0	+1 3.4	.....	.....	+ 7 2 59.7
	(m) α Bootis .....	55.6	61.4	0.0	35 58 58.5	- 0.1	66.0	29.83	64.0	+0 40.7	55.2	.....	+20 1 15.7
	α Coronæ borealis .....	50.8	57.7	-0.1	28 44 54.2	.....	63.5	29.84	63.4	+0 30.9	54.9	.....	+27 15 29.7
June 18	(n) Sun North L. ....	36.8	42.5	-0.1	32 19 39.6	+ 0.8	.....	.....	.....	+0 35.7	.....	.....	+23 40 37.8
	(o) Sun South L. ....	7.2	13.8	-0.1	32 51 10.4	0.0	59.9	29.67	60.5	+0 36.4	.....	.....	+23 9 7.1
	Venus Centre .....	40.5	47.3	0.0	35 50 43.9	.....	61.7	29.63	61.0	+0 40.5	.....	.....	+20 9 29.5
June 19	(a) Sun South L. ....	49.3	53.7	-0.1	32 49 51.4	+ 0.6	.....	.....	.....	+0 35.9	.....	53.0	+23 10 25.1
	(p) Sun North L. ....	21.5	25.1	-0.1	32 18 23.3	0.0	64.6	29.57	63.4	+0 35.2	.....	.....	+23 41 54.5
	Venus Centre .....	53.2	59.1	0.0	36 9 56.2	.....	68.7	29.59	66.8	+0 40.4	.....	.....	+19 50 16.4
	α Leonis.....	54.5	60.8	0.0	43 14 57.7	.....	68.1	29.62	67.0	+0 52.0	53.6	.....	+12 45 3.3
	α Ursæ Majoris .....	40.2	46.2	-0.6	353 23 42.6	.....	.....	.....	.....	-0 6.5	52.3	.....	+62 37 16.9
	δ Leonis .....	56.5	62.0	0.0	34 35 59.2	.....	67.8	29.63	66.0	+0 38.2	53.7	.....	+21 24 15.6
	Mars Centre .....	17.1	22.0	+0.1	54 13 19.7	.....	.....	.....	.....	+1 17.0	.....	.....	+ 1 46 16.3
	η Virginis.....	59.0	64.5	+0.1	55 46 1.8	.....	.....	.....	.....	+1 21.7	.....	.....	+ 0 13 29.5
	(q) Moon North L. ....	33.1	37.0	+0.1	60 47 35.2	+11.9	.....	.....	.....	+1 39.4	.....	.....	- 4 48 33.5
	(r) .....	50.0	54.0	+0.1	60 47 52.2	- 5.5	.....	.....	.....	+1 39.4	.....	.....	- 4 48 33.1
	(s) α Ursæ Minoris S. P. ....	23.0	28.5	0.0	324 29 25.8	-57.5	.....	.....	.....	-0 40.0	52.4	.....	+88 26 55.3
	Jupiter Centre.....	14.0	19.8	+0.1	58 20 17.0	.....	65.0	29.67	65.0	+1 30.2	.....	.....	- 2 20 54.2
	Saturn Centre .....	32.2	36.9	+0.1	75 17 34.7	.....	59.0	29.72	61.5	+3 31.9	.....	.....	-19 20 13.6
June 25	Sun South L. ....	39.8	45.2	-0.1	32 50 42.4	.....	55.5	29.52	56.3	+0 36.6	.....	53.2	+23 9 34.2
June 27	(t) β Ursæ Minoris.....	15.0	21.0	-0.4	341 12 17.5	+ 5.7	49.0	29.46	51.9	-0 19.6	53.4	53.4	.....
June 29	(u) α Ursæ Majoris.....	44.5	50.5	-0.6	353 23 46.9	0.0	52.0	29.84	53.4	-0 6.8	55.2	55.5	+62 37 15.4
	ε Bootis .....	4.0	11.0	-0.1	28 15 7.4	.....	.....	.....	.....	+0 31.3	56.6	.....	+27 45 16.8
	α <sup>2</sup> Libræ.....	25.2	27.8	+0.1	71 20 26.6	.....	48.2	29.89	51.3	+2 50.7	53.9	.....	-15 22 21.8
	β Ursæ Minoris.....	22.0	27.8	-0.4	341 12 24.4	.....	.....	.....	.....	-0 19.9	54.6	.....	+74 48 51.0
	β Libræ.....	9.0	13.0	+0.1	64 46 11.1	.....	.....	.....	.....	+2 3.0	57.3	.....	- 8 47 18.6
	Saturn Centre .....	34.3	39.0	+0.1	75 12 36.8	.....	48.0	29.89	51.0	+3 37.0	.....	.....	-19 15 18.3
	Groomb. 944 S. P. ....	4.9	10.9	+0.1	321 7 7.9	.....	47.5	29.89	50.6	-0 47.2	.....	.....	+85 5 25.2
(a) At Wire I. (f) 30 <sup>s</sup> before transit. (l) At 10 <sup>h</sup> 57 <sup>m</sup> 24 <sup>s</sup> . (q) At 12 <sup>h</sup> 23 <sup>m</sup> 50 <sup>s</sup> .													
(b) 50 <sup>s</sup> after transit. (g) At 5 <sup>h</sup> 42 <sup>m</sup> 0 <sup>s</sup> . (m) At Wire IV. (r) At 12 <sup>h</sup> 25 <sup>m</sup> 2 <sup>s</sup> .													
(c) At 10 <sup>h</sup> 8 <sup>m</sup> 26 <sup>s</sup> . (h) At 10 <sup>h</sup> 55 <sup>m</sup> 25 <sup>s</sup> . (n) At 5 <sup>h</sup> 44 <sup>m</sup> 22 <sup>s</sup> . (s) At 12 <sup>h</sup> 29 <sup>m</sup> 10 <sup>s</sup> .													
(d) At 10 <sup>h</sup> 9 <sup>m</sup> 15 <sup>s</sup> . (i) At 10 <sup>h</sup> 56 <sup>m</sup> 10 <sup>s</sup> . (o) At 5 <sup>h</sup> 45 <sup>m</sup> 54 <sup>s</sup> . (t) At 14 <sup>h</sup> 55 <sup>m</sup> 6 <sup>s</sup> .													
(e) At 10 <sup>h</sup> 10 <sup>m</sup> 14 <sup>s</sup> . (k) At 10 <sup>h</sup> 56 <sup>m</sup> 52 <sup>s</sup> . (p) At Wire V. (u) At 10 <sup>h</sup> 54 <sup>m</sup> 30 <sup>s</sup> .													

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
July 1	(a) Sun North L. ....	47.8	54.8	-0.1	32 34 51.2	+ 1.1	.....	.....	.....	+0 36.6	.....	56.8	+23 25 27.9
	(b) Sun South L. ....	21.4	26.6	-0.1	33 6 23.9	- 0.1	57.9	29.97	55.0	+0 37.3	.....	.....	+22 53 55.7
	Mercury Centre .....	16.0	21.0	-0.1	31 38 18.5	.....	.....	.....	.....	+0 35.3	.....	.....	+24 22 3.0
	(c) $\alpha$ Coronæ borealis ....	47.8	56.0	-0.1	28 44 51.8	+ 0.7	51.7	29.98	55.4	+0 31.8	56.6	.....	+27 15 32.5
	(d) $\zeta$ Ursæ Minoris .....	4.2	11.0	-0.3	337 44 7.3	+ 0.6	.....	.....	.....	-0 23.9	55.7	.....	+78 17 12.8
	$\delta$ Ophiuchi .....	57.3	62.1	+0.1	59 15 59.8	.....	.....	.....	.....	+1 37.4	58.0	.....	- 3 16 40.4
	Saturn Centre .....	47.5	52.5	+0.1	75 11 50.0	.....	51.0	29.98	54.9	+3 36.0	.....	.....	-19 14 29.2
	* R. A. 16 <sup>h</sup> 42 <sup>m</sup> 40 <sup>s</sup> ..	30.0	35.7	0.0	40 20 32.8	.....	.....	.....	.....	+0 49.3	.....	.....	+15 39 34.7
	(e) * R. A. 16 43 56 .....	45.8	52.1	0.0	39 55 48.9	- 0.1	.....	.....	.....	+0 48.6	.....	.....	+16 4 19.4
	(f) Groomb. 944 S. P. ...	7.4	13.6	+0.1	321 7 10.5	- 2.4	.....	.....	.....	-0 47.0	.....	.....	+85 5 24.3
	* R. A. 17 <sup>h</sup> 11 <sup>m</sup> 30 <sup>s</sup> ..	52.0	59.8	-0.2	27 5 55.7	.....	50.9	29.98	54.6	+0 29.7	.....	.....	+28 54 31.4
July 2	* R. A. 16 <sup>h</sup> 42 <sup>m</sup> 40 <sup>s</sup> ..	31.4	36.2	0.0	40 20 33.8	.....	55.5	30.00	56.1	+0 48.9	.....	56.4	+15 39 33.7
	$\gamma$ Draconis .....	16.2	22.9	-0.5	4 30 19.0	.....	.....	.....	.....	+0 4.5	56.4	.....	+51 30 32.9
	$\delta$ Ursæ Minoris .....	6.0	12.8	-0.1	329 26 9.3	.....	54.1	29.99	54.8	-0 34.3	56.6	.....	+86 35 21.4
	$\alpha$ Lyræ .....	25.9	30.1	-0.3	17 22 27.6	.....	.....	.....	.....	+0 18.0	56.3	.....	+38 38 10.8
July 3	(c) Sun South L. ....	48.5	54.2	-0.1	33 14 51.3	+ 0.8	.....	.....	.....	+0 36.9	.....	55.6	+22 45 26.6
	(g) Sun North L. ....	17.7	23.2	-0.1	32 43 20.4	0.0	65.2	29.95	60.7	+0 36.2	.....	.....	+23 16 59.0
	Mercury Centre .....	18.9	25.0	-0.1	32 1 21.8	.....	66.6	.....	.....	+0 35.1	.....	.....	+23 58 58.7
	$\beta$ Ursæ Minoris .....	20.3	27.0	-0.4	341 12 23.2	.....	62.0	29.92	62.0	-0 19.4	54.4	.....	+74 48 51.8
	$\beta$ Libræ .....	10.0	16.2	+0.1	64 46 13.2	.....	.....	.....	.....	+1 59.8	56.5	.....	- 8 47 17.4
	$\alpha$ Coronæ borealis .....	48.4	56.1	-0.1	28 44 52.2	.....	.....	.....	.....	+0 31.2	55.9	.....	+27 15 32.2
	Saturn Centre .....	2.4	8.6	+0.1	75 11 5.6	.....	59.0	29.92	60.0	+3 31.8	.....	.....	-19 13 41.8
	* R. A. 16 <sup>h</sup> 42 <sup>m</sup> 40 <sup>s</sup> ..	29.5	35.6	0.0	40 20 32.5	.....	.....	.....	.....	+0 48.5	.....	.....	+15 39 34.6
	* R. A. 16 43 56 .....	47.8	53.4	0.0	39 55 50.6	.....	.....	.....	.....	+0 47.8	.....	.....	+16 4 17.2
	(h) Groomb. 944 S. P. ...	3.1	10.0	+0.1	321 7 6.6	- 1.7	.....	.....	.....	-0 46.4	.....	.....	+85 5 22.9
	* R. A. 17 <sup>h</sup> 11 <sup>m</sup> 30 <sup>s</sup> ..	51.9	59.5	-0.2	27 5 55.5	.....	.....	.....	.....	+0 29.3	.....	.....	+28 54 30.8
	(c) * R. A. 17 15 30 .....	5.9	11.3	-0.2	23 59 8.4	+ 0.8	.....	.....	.....	+0 25.5	.....	.....	+32 1 20.9
	* R. A. 17 16 3 .....	51.1	56.8	-0.2	23 51 53.7	.....	.....	.....	.....	+0 25.3	.....	.....	+32 8 36.6
	* R. A. 17 21 0 .....	30.5	35.5	-0.3	21 10 32.7	.....	.....	.....	.....	+0 22.2	.....	.....	+34 50 0.7
	* R. A. 17 23 43 .....	29.1	34.0	-0.3	20 56 31.2	.....	.....	.....	.....	+0 21.9	.....	.....	+35 4 2.5
	* R. A. 17 26 7 .....	3.7	9.8	-0.3	21 4 6.5	.....	.....	.....	.....	+0 22.1	.....	.....	+34 56 27.0
	* R. A. 17 28 1 .....	15.9	21.3	-0.3	21 21 18.3	.....	.....	.....	.....	+0 22.4	.....	.....	+34 39 14.9
	(i) * R. A. 17 29 0 .....	58.4	64.2	-0.3	21 9 1.0	+ 0.2	.....	.....	.....	+0 22.2	.....	.....	+34 51 32.2
	* R. A. 17 45 21 .....	52.4	58.0	-0.4	14 45 54.8	.....	55.2	29.92	56.4	+0 15.1	.....	.....	+41 14 45.7
* R. A. 17 50 4 .....	33.3	39.1	-0.4	14 30 35.8	.....	.....	.....	.....	+0 14.8	.....	.....	+41 30 5.0	
July 4	(c) Sun North L. ....	8.8	14.5	-0.1	32 48 11.6	+ 0.8	.....	.....	.....	+0 36.4	.....	55.2	+23 12 6.4
	(k) Sun South L. ....	38.9	44.5	-0.1	33 19 41.6	0.0	63.1	29.88	61.8	+0 37.1	.....	.....	+22 40 36.5
	Mercury Centre .....	30.1	35.3	-0.1	32 16 32.6	.....	64.1	.....	.....	+0 35.6	.....	.....	+23 43 47.0
	(c) Venus Centre .....	54.5	60.9	0.0	41 45 57.7	- 0.5	.....	.....	.....	+0 50.0	.....	.....	+14 14 8.0
	$\alpha$ Leonis .....	54.9	60.4	0.0	43 14 57.7	.....	66.8	29.88	64.3	+0 52.6	54.5	.....	+12 45 4.9
	$\alpha$ Ursæ Majoris .....	42.8	50.8	-0.6	353 23 46.2	.....	.....	.....	.....	-0 6.6	54.0	.....	+62 37 15.6
	* R. A. 16 <sup>h</sup> 43 <sup>m</sup> 56 <sup>s</sup> ..	48.5	54.8	0.0	39 55 51.6	.....	57.1	29.89	58.8	+0 47.8	.....	.....	+16 4 15.8
	$\delta$ Ursæ Minoris .....	56.8	63.3	-0.2	333 43 59.9	.....	.....	.....	.....	-0 28.4	57.0	.....	+82 17 23.7
	(l) Groomb. 944 S. P. ...	3.2	10.0	+0.1	321 7 6.6	- 2.0	.....	.....	.....	-0 46.4	.....	.....	+85 5 23.0
	* R. A. 17 <sup>h</sup> 11 <sup>m</sup> 30 <sup>s</sup> ..	52.3	59.2	-0.2	27 5 55.5	.....	.....	.....	.....	+0 29.3	.....	.....	+28 54 30.4
	(m) * R. A. 17 15 30 .....	7.5	12.2	-0.2	23 59 9.7	+ 0.3	.....	.....	.....	+0 25.5	.....	.....	+32 1 19.7
	(e) * R. A. 17 16 3 .....	51.9	57.4	-0.2	23 51 54.4	- 0.1	.....	.....	.....	+0 25.3	.....	.....	+32 8 35.6
	* R. A. 17 21 0 .....	31.2	36.5	-0.3	21 10 33.5	.....	.....	.....	.....	+0 22.2	.....	.....	+34 49 59.5
	* R. A. 17 23 43 .....	29.5	34.9	-0.3	20 56 31.9	.....	.....	.....	.....	+0 21.9	.....	.....	+35 4 1.4
	* R. A. 17 26 7 .....	4.4	10.5	-0.3	21 4 7.2	.....	.....	.....	.....	+0 22.1	.....	.....	+34 56 25.9
	(n) * R. A. 17 28 1 .....	15.9	21.5	-0.3	21 21 18.4	0.0	.....	.....	.....	+0 22.4	.....	.....	+34 39 14.4
	(i) * R. A. 17 29 0 .....	59.5	64.9	-0.3	21 9 1.9	+ 0.2	.....	.....	.....	+0 22.2	.....	.....	+34 51 30.9
	* R. A. 17 45 21 .....	54.1	59.9	-0.4	14 45 56.6	.....	55.0	29.88	56.0	+0 15.1	.....	.....	+41 14 43.5
	* R. A. 17 50 4 .....	33.7	39.9	-0.4	14 30 36.4	.....	.....	.....	.....	+0 14.8	.....	.....	+41 30 4.0
(a) At 6 <sup>h</sup> 38 <sup>m</sup> 30 <sup>s</sup> .		(e) At Wire IV.		(h) At 17 <sup>h</sup> 8 <sup>m</sup> 40 <sup>s</sup> .		(l) At 17 <sup>h</sup> 8 <sup>m</sup> 30 <sup>s</sup> .							
(b) At 6 <sup>h</sup> 40 <sup>m</sup> 10 <sup>s</sup> .		(f) At 17 <sup>h</sup> 8 <sup>m</sup> 0 <sup>s</sup> .		(i) At Wire V.		(m) At Wire II.							
(c) At Wire I.		(g) At 6 <sup>h</sup> 48 <sup>m</sup> 45 <sup>s</sup> .		(k) At 6 <sup>h</sup> 53 <sup>m</sup> 0 <sup>s</sup> .		(n) 10 <sup>s</sup> after transit.							
(d) At 15 <sup>h</sup> 52 <sup>m</sup> 0 <sup>s</sup> .													



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
July 5	(a) Sun South L. ....	53.0	59.0	-0.1	33 24 55.9	+ 0.8	.....	In. ....	.....	+0 37.0	.....	55.2	+22 35 21.5
	(b) Sun North L. ....	21.9	27.9	-0.1	32 53 24.8	- 0.1	64.0	29.77	62.8	+0 36.3	.....	.....	+23 6 54.2
	Mercury Centre .....	55.8	61.4	-0.1	32 33 58.5	.....	65.0	.....	.....	+0 35.8	.....	.....	+23 26 20.9
July 8	(c) Sun North L. .... *	30.5	35.3	-0.1	33 11 32.9	+ 0.6	.....	.....	.....	+0 35.9	.....	55.1	+22 48 45.7
	(d) Sun South L. ....	58.9	65.2	-0.1	33 43 2.0	- 0.1	64.5	29.11	61.8	+0 36.6	.....	.....	+22 17 16.6
	Mercury Centre .....	28.0	32.9	-0.1	33 38 30.4	.....	65.8	.....	.....	+0 36.4	.....	.....	+22 21 48.3
	$\alpha$ Leonis .....	56.9	63.2	0.0	43 15 0.1	.....	64.7	29.12	62.3	+0 51.6	56.0	.....	+12 45 3.4
	(e) Venus South L. ....	54.7	62.0	0.0	43 27 58.4	+ 1.1	.....	.....	.....	+0 52.0	.....	.....	+12 32 3.6
	(f) Venus North L. ....	34.9	40.9	0.0	43 27 38.0	- 0.9	.....	.....	.....	+0 52.0	.....	.....	+12 32 26.0
	$\alpha$ Ursæ Majoris .....	43.5	50.9	-0.6	353 23 46.6	.....	.....	.....	.....	-0 6.4	54.0	.....	+62 37 14.9
	$\delta$ Leonis .....	58.1	64.2	0.0	34 36 1.1	.....	64.0	29.13	62.8	+0 37.9	55.4	.....	+21 24 16.1
	$\theta$ Draconis .....	6.2	12.9	-0.6	357 1 8.9	.....	56.2	29.16	59.8	-0 3.0	.....	.....	+58 59 49.2
	Saturn Centre .....	24.1	29.2	+0.1	75 9 26.8	.....	.....	.....	.....	+3 27.3	.....	.....	-19 11 59.0
	Groomb. 944 S. P. ...	59.2	65.8	+0.1	321 7 2.5	.....	.....	.....	.....	-0 45.4	.....	.....	+85 5 22.0
	(a) * R. A. 17 <sup>h</sup> 15 <sup>m</sup> 30 <sup>s</sup>	5.7	10.2	-0.2	23 59 7.8	+ 0.8	.....	.....	.....	+0 25.0	.....	.....	+32 1 21.5
	* R. A. 17 16 3	52.2	57.3	-0.2	23 51 54.5	.....	.....	.....	.....	+0 24.8	.....	.....	+32 8 35.8
	* R. A. 17 21 0	29.8	34.2	-0.3	21 10 31.7	.....	.....	.....	.....	+0 21.7	.....	.....	+34 50 1.7
	* R. A. 17 23 43	28.9	33.0	-0.3	20 56 30.6	.....	.....	.....	.....	+0 21.5	.....	.....	+35 4 3.0
	* R. A. 17 26 7	3.6	9.0	-0.3	21 4 6.0	.....	.....	.....	.....	+0 21.6	.....	.....	+34 56 27.5
	* R. A. 17 28 1	14.6	19.8	-0.3	21 21 16.9	.....	.....	.....	.....	+0 21.9	.....	.....	+34 39 16.3
	(g) * R. A. 17 29 0	58.2	63.8	-0.3	21 9 0.7	- 0.1	.....	.....	.....	+0 21.7	.....	.....	+34 51 32.8
	* R. A. 17 45 21	54.0	59.9	-0.4	14 45 56.5	.....	53.8	29.18	57.8	+0 14.8	.....	.....	+41 14 43.8
	* R. A. 17 50 4	32.5	38.0	-0.4	14 30 34.8	.....	.....	.....	.....	+0 14.5	.....	.....	+41 30 5.8
July 9	(h) Sun North L. ....	20.0	24.0	-0.1	33 18 21.9	+ 0.1	61.5	29.17	58.9	+0 36.3	.....	54.4	+22 41 56.1
	$\gamma$ Draconis .....	12.9	18.2	-0.5	4 30 15.0	.....	52.0	29.25	55.5	+0 4.4	54.5	.....	+51 30 35.0
	(i) 51 (Hev.) Cephei S.P.*	27.3	32.8	+0.1	323 17 30.2	- 2.0	.....	.....	.....	-0 42.4	54.7	.....	+87 15 51.4
	(k) $\delta$ Ursæ Minoris .....	0.5	6.3	-0.1	329 26 3.3	+ 0.4	.....	.....	.....	-0 33.6	53.9	.....	+86 35 24.3
	(l) 24 Ursæ Minoris .....	32.4	38.3	-0.1	329 3 35.3	+ 1.2	.....	.....	.....	-0 34.1	.....	.....	+86 57 52.0
July 10	Groomb. 1119 S. P. ...	40.5	44.9	0.0	325 4 42.7	.....	52.1	29.26	55.3	-0 39.7	.....	.....	+89 3 8.6
	(m) Venus North L. ....	58.7	64.8	0.0	44 20 1.7	- 1.4	64.0	29.20	59.5	+0 53.8	.....	54.8	+11 40 0.7
	$\alpha$ Ursæ Majoris .....	45.1	51.3	-0.6	353 23 47.6	.....	.....	.....	.....	-0 6.5	54.6	.....	+62 37 13.7
	(n) $\beta$ Leonis .....	49.9	55.8	0.0	40 31 52.8	- 0.1	.....	.....	.....	+0 47.3	54.8	.....	+15 28 14.8
	$\gamma$ Ursæ Majoris .....	22.0	28.2	-0.5	1 25 24.6	.....	63.0	29.26	60.5	+0 1.3	55.1	.....	+54 35 28.9
July 12	$\eta$ Draconis .....	10.2	16.1	-0.6	354 8 12.6	.....	53.6	29.47	56.5	-0 5.9	55.8	55.7	+61 52 49.0
	$\alpha$ Herculis .....	24.2	28.9	0.0	41 25 26.5	.....	.....	.....	.....	+0 50.1	55.5	.....	+14 34 39.1
	$\gamma$ Draconis .....	12.9	19.2	-0.5	4 30 15.5	.....	52.9	29.50	54.0	+0 4.4	55.9	.....	+51 30 35.8
July 13	(o) Sun South L. ....	57.7	62.2	0.0	34 20 59.9	+ 0.1	61.9	29.68	60.6	+0 38.4	.....	55.2	+21 39 16.8
	(p) Mercury Centre .....	14.8	21.0	0.0	35 58 18.0	- 1.3	62.9	29.70	61.9	+0 40.7	.....	.....	+20 1 57.8
	(q) $\alpha$ Leonis .....	55.8	61.0	0.0	43 14 58.4	- 0.2	63.9	29.70	62.6	+0 52.7	55.2	.....	.....
	(r) Venus South L. ....	24.0	28.5	+0.1	45 40 26.3	- 1.2	63.8	29.71	62.9	+0 57.3	.....	.....	+10 19 32.8
July 15	(s) $\alpha$ Leonis .....	55.7	61.7	0.0	43 14 58.7	- 0.2	60.1	29.52	59.3	+0 52.8	55.6	55.3	+12 45 4.0
	(t) Venus North L. ....	16.1	21.1	+0.1	46 34 18.7	- 1.3	.....	.....	.....	+0 59.3	.....	.....	+ 9 25 38.6
	$\alpha$ Ursæ Majoris .....	46.5	53.0	-0.6	353 23 49.2	.....	.....	.....	.....	-0 6.6	55.2	.....	+62 37 12.7
	(u) Moon North L. ....	3.9	9.0	+0.1	52 35 6.5	- 3.6	59.0	29.51	59.2	+1 13.4	.....	.....	+ 3 24 39.0
	$\alpha$ Serpentis .....	43.9	50.0	+0.1	49 3 47.1	.....	54.1	29.59	57.6	+1 5.6	55.7	.....	+ 6 56 2.6
	(x) $\delta$ Ursæ Minoris .....	0.0	6.2	-0.1	329 26 3.0	+ 0.1	.....	.....	.....	-0 34.0	54.7	.....	+86 35 26.2
	(y) 24 Ursæ Minoris .....	32.0	37.9	-0.1	329 3 34.9	+ 0.5	.....	.....	.....	-0 34.6	.....	.....	+86 57 54.5
	Groomb. 1119 S. P. ...	41.0	44.6	0.0	325 4 42.8	.....	51.0	29.61	52.6	-0 40.2	.....	.....	+89 3 7.3

(a) At Wire I.

(b) At 6<sup>h</sup> 57<sup>m</sup> 5<sup>s</sup>.(c) At 7<sup>h</sup> 7<sup>m</sup> 20<sup>s</sup>.(d) At 7<sup>h</sup> 8<sup>m</sup> 55<sup>s</sup>.

(e) At Wire I. Cor-

rection for defect  
of illumination 0<sup>u</sup>.5.

(f) At Wire V.

(g) At Wire IV.

(h) At 7<sup>h</sup> 11<sup>m</sup> 54<sup>s</sup>.(i) At 18<sup>h</sup> 18<sup>m</sup> 35<sup>s</sup>.(k) At 18<sup>h</sup> 23<sup>m</sup> 0<sup>s</sup>.(l) At 18<sup>h</sup> 34<sup>m</sup> 20<sup>s</sup>.(m) At 10<sup>h</sup> 20<sup>m</sup> 30<sup>s</sup>.(n) At 11<sup>h</sup> 42<sup>m</sup> 15<sup>s</sup>.(o) At 7<sup>h</sup> 28<sup>m</sup> 40<sup>s</sup>.(p) At 8<sup>h</sup> 43<sup>m</sup> 15<sup>s</sup>.(q) At 10<sup>h</sup> 1<sup>m</sup> 25<sup>s</sup>.(r) At 10<sup>h</sup> 32<sup>m</sup> 5<sup>s</sup>. Correction for  
defect of illumination 0<sup>u</sup>.6.(s) At 10<sup>h</sup> 1<sup>m</sup> 35<sup>s</sup>.(t) At 10<sup>h</sup> 39<sup>m</sup> 57<sup>s</sup>.(u) At 11<sup>h</sup> 22<sup>m</sup> 53<sup>s</sup>; faint.(x) At 18<sup>h</sup> 26<sup>m</sup> 10<sup>s</sup>.(y) At 18<sup>h</sup> 33<sup>m</sup> 50<sup>s</sup>.

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
July 16	$\gamma$ Draconis .....	12.0	19.0	-0.5	4 30 15.0	.....	55.1	29.79	58.0	+0 4.5	56.6	56.0	+ 51 30 36.5
	(a) 51 (Hev.) Cephei S.P. ....	25.8	31.0	+0.1	323 17 28.4	- 0.8	.....	.....	.....	-0 42.9	55.5	.....	+ 87 15 48.7
	(b) $\delta$ Ursæ Minoris .....	0.5	7.7	-0.1	329 26 4.0	+ 0.1	.....	.....	.....	-0 34.0	56.0	.....	+ 86 35 25.9
	(c) 24 Ursæ Minoris .....	31.7	37.9	-0.1	329 3 34.7	+ 0.6	54.5	29.80	57.5	-0 34.5	.....	.....	+ 86 57 55.2
July 17	(d) 51 (Hev.) Cephei S.P. ....	23.9	29.5	+0.1	323 17 26.7	- 0.1	.....	.....	.....	-0 42.4	55.4	55.8	+ 87 15 48.4
	(e) $\delta$ Ursæ Minoris .....	59.9	66.9	-0.1	329 26 3.3	+ 0.1	.....	.....	.....	-0 33.6	56.0	.....	+ 86 35 26.0
	$\alpha$ Lyræ .....	21.2	26.0	-0.3	17 22 23.2	.....	56.0	29.57	58.1	+0 17.7	56.0	.....	+ 38 35 27.1
	(f) 24 Ursæ Minoris .....	27.0	33.4	-0.1	329 3 30.1	+ 4.3	.....	.....	.....	-0 34.1	.....	.....	+ 86 57 55.5
July 18	(g) $\alpha$ Ophiuchi .....	9.0	13.1	0.0	43 19 11.1	- 0.2	57.6	29.04	58.0	+0 52.3	56.1	55.6	+ 12 40 52.4
	$\gamma$ Draconis .....	11.5	17.2	-0.5	4 30 13.8	.....	.....	.....	.....	+0 4.3	55.7	.....	+ 51 30 37.5
	$\delta$ Ursæ Minoris .....	58.0	65.4	-0.1	329 26 1.6	.....	.....	.....	.....	-0 33.1	55.0	.....	+ 86 35 27.1
	24 Ursæ Minoris .....	30.9	36.8	-0.1	329 3 33.8	.....	56.0	29.07	57.8	-0 33.6	.....	.....	+ 86 57 55.4
July 20	$\gamma$ Ursæ Majoris .....	23.9	28.4	-0.5	1 25 25.6	.....	63.1	29.16	59.5	+0 1.3	54.9	56.1	+ 54 35 29.2
	$\beta$ Draconis .....	25.4	31.4	-0.5	3 35 27.9	.....	56.0	29.22	58.3	+0 3.5	56.0	.....	+ 52 25 24.7
	$\zeta$ Aquilæ .....	18.3	23.5	0.0	42 22 20.8	.....	56.1	29.23	57.9	+0 51.1	57.4	.....	+ 13 37 44.2
July 21	(h) Moon North L. ....	44.0	47.2	+0.1	82 21 45.6	- 7.1	58.2	29.40	59.0	+6 33.6	.....	55.0	-26 27 17.1
	$\alpha$ Scorpii .....	55.5	61.0	+0.1	81 58 58.4	.....	.....	.....	.....	+6 16.6	.....	.....	-26 4 20.0
	(i) $\eta$ Draconis .....	6.9	13.0	-0.6	354 8 9.4	+ 0.5	.....	.....	.....	-0 5.8	55.0	.....	.....
July 24	(k) Saturn Centre .....	37.7	43.5	+0.1	75 6 40.6	.....	59.2	29.31	60.3	+3 26.3	.....	55.4	-19 9 11.5
	$\eta$ Draconis .....	7.1	13.2	-0.6	354 8 9.7	.....	.....	.....	.....	-0 5.8	55.2	.....	+ 61 52 51.5
	$\epsilon$ Ursæ Minoris .....	50.8	56.1	-0.2	333 43 53.3	.....	.....	.....	.....	-0 27.7	55.8	.....	+ 82 17 29.8
	$\alpha$ Herculis .....	22.0	27.5	0.0	41 25 24.7	.....	58.2	29.31	59.0	+0 49.3	54.7	.....	+ 14 34 41.4
	$\delta$ Ursæ Minoris .....	57.9	63.9	-0.1	329 26 0.7	.....	57.5	29.31	58.0	-0 33.2	55.8	.....	+ 86 35 27.9
July 25	(l) Sun North L. ....	55.0	59.4	0.0	35 57 57.3	- 0.4	56.0	29.42	57.8	+0 40.9	.....	56.4	+ 20 2 18.6
	(m) $\epsilon$ Ursæ Minoris .....	49.0	54.8	-0.2	333 43 51.8	+ 2.0	54.0	29.45	58.4	-0 28.1	56.1	.....	+ 82 17 30.7
	$\alpha$ Lyræ .....	18.8	23.9	-0.3	17 22 20.9	.....	53.8	29.45	57.3	+0 17.7	55.9	.....	+ 38 38 17.8
	(n) $\beta$ Lyræ .....	40.0	46.5	-0.2	22 49 43.1	+ 0.3	.....	.....	.....	+0 23.9	57.1	.....	+ 33 10 49.1
July 26	(o) Sun South L. ....	23.8	29.1	0.0	36 42 26.3	+ 1.1	.....	.....	.....	+0 42.0	.....	55.8	+ 19 17 46.4
	(p) Sun North L. ....	50.6	56.2	0.0	36 10 53.4	- 0.5	56.8	29.40	58.5	+0 41.2	.....	.....	+ 19 49 21.7
	(q) Mercury Centre .....	32.0	37.1	0.0	43 35 34.5	- 1.2	56.7	29.38	57.8	+0 53.5	.....	.....	+ 12 24 29.0
July 27	$\gamma$ Ursæ Majoris .....	25.0	31.0	-0.5	1 25 27.5	.....	54.8	29.36	56.5	+0 1.3	55.7	55.3	+ 54 35 26.5
	(r) $\eta$ Draconis .....	6.4	13.8	-0.6	354 8 9.6	0.0	53.8	29.41	56.5	-0 5.9	55.4	.....	+ 61 52 51.6
	$\delta$ Ursæ Minoris .....	56.0	63.8	-0.1	329 25 59.7	.....	53.0	29.42	56.1	-0 33.7	55.1	.....	+ 86 35 29.3
	$\alpha$ Lyræ .....	17.5	22.5	-0.3	17 22 19.6	.....	.....	.....	.....	+0 17.7	55.1	.....	+ 38 38 18.0
July 29	Sun North L. ....	36.2	39.4	0.0	36 51 37.7	.....	59.0	29.59	58.9	+0 42.3	.....	55.9	+ 19 8 35.9
	Venus North L. ....	47.1	52.1	+0.1	53 4 49.7	.....	61.1	29.55	59.9	+1 14.5	.....	.....	+ 2 54 51.7
	$\epsilon$ Ursæ Minoris .....	50.1	56.7	-0.2	333 43 53.3	.....	54.2	29.53	58.2	-0 28.2	56.2	.....	+ 82 17 30.8
	$\alpha$ Herculis .....	20.9	27.0	0.0	41 25 23.9	.....	.....	.....	.....	+0 50.1	55.4	.....	+ 14 34 41.9
	$\beta$ Draconis .....	23.8	29.2	-0.5	3 35 26.0	.....	.....	.....	.....	+0 3.5	56.1	.....	+ 52 25 26.4
July 30	(s) Sun South L. ....	20.8	26.0	0.0	37 37 23.3	+ 0.9	.....	.....	.....	+0 43.7	.....	56.4	+ 18 22 48.5
	(t) Sun North L. ....	51.5	56.5	0.0	37 5 54.0	- 0.5	55.0	29.51	57.0	+0 42.9	.....	.....	+ 18 54 20.0
	Mercury Centre .....	10.8	17.1	+0.1	46 1 14.0	.....	56.9	29.50	57.4	+0 58.5	.....	.....	+ 9 58 43.9
	$\alpha$ Ursæ Majoris .....	51.0	57.2	-0.6	353 23 53.6	.....	.....	.....	.....	-0 6.6	56.3	.....	+ 62 37 9.4
	(u) Venus South L. ....	19.4	24.7	+0.1	53 33 22.2	+ 1.0	.....	.....	.....	+1 16.2	.....	.....	+ 2 26 17.0
	(g) Venus North L. ....	55.9	62.0	+0.1	53 32 59.2	- 1.0	57.0	29.48	57.4	+1 16.2	.....	.....	+ 2 26 42.0
	(k) $\beta$ Leonis .....	51.6	56.2	0.0	40 31 53.8	.....	.....	.....	.....	+0 48.2	56.8	.....	+ 15 28 14.4
	(v) At Wire I. : Correc- tion for defect of illumination 1".0.												

(a) At 18<sup>h</sup> 20<sup>m</sup> 6<sup>s</sup>.  
 (b) At 18<sup>h</sup> 23<sup>m</sup> 40<sup>s</sup>.  
 (c) At 18<sup>h</sup> 33<sup>m</sup> 0<sup>s</sup>.  
 (d) At 18<sup>h</sup> 21<sup>m</sup> 50<sup>s</sup>.  
 (e) At 18<sup>h</sup> 25<sup>m</sup> 30<sup>s</sup>.

(f) At 18<sup>h</sup> 37<sup>m</sup> 15<sup>s</sup>.  
 (g) At 17<sup>h</sup> 28<sup>m</sup> 40<sup>s</sup>.  
 (h) At 16<sup>h</sup> 3<sup>m</sup> 58<sup>s</sup>; cloudy.  
 (i) At 16<sup>h</sup> 23<sup>m</sup> 24<sup>s</sup>.  
 (k) Faint.

(l) At 8<sup>h</sup> 18<sup>m</sup> 8<sup>s</sup>.  
 (m) At 17<sup>h</sup> 6<sup>m</sup> 35<sup>s</sup>.  
 (n) At Wire II.  
 (o) At 8<sup>h</sup> 20<sup>m</sup> 23<sup>s</sup>.

(p) At 8<sup>h</sup> 21<sup>m</sup> 56<sup>s</sup>.  
 (q) At Wire V.  
 (r) 20<sup>s</sup> after transit.  
 (s) At Wire I.

(t) At 8<sup>h</sup> 36<sup>m</sup> 58<sup>s</sup>.  
 (u) At Wire I. : Correc-  
 tion for defect of  
 illumination 1".0.



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
July 30	(a) $\alpha$ Ursæ Minoris S. P.	46.5	53.0	0.0	324 28 49.8	- 13.6	.....	.....	.....	- 0 40.5	55.9	56.4	+ 88 26 59.3
	(b) 12 Canum Venat. ....	16.0	20.0	- 0.3	16 49 17.7	0.0	56.3	29.47	57.6	+ 0 17.1	56.4	.....	+ 39 11 21.6
Aug. 1	(c) Sun North L. ....	8.5	14.4	0.0	37 35 11.4	+ 0.8	.....	.....	.....	+ 0 43.8	.....	56.3	+ 18 25 0.3
	(d) Sun South L. ....	40.6	45.8	0.0	38 6 43.1	- 0.6	54.6	29.58	56.0	+ 0 44.6	.....	.....	+ 17 53 29.2
	(e) Venus North L. ....	1.5	7.6	+ 0.1	54 29 4.7	- 1.3	.....	.....	.....	+ 1 18.5	.....	.....	+ 1 30 34.4
	$\gamma$ Ursæ Majoris. ....	27.1	32.4	- 0.5	1 25 29.2	.....	60.7	29.57	57.5	+ 0 1.3	56.5	.....	+ 54 35 25.8
	(f) $\alpha$ Lyræ. ....	16.0	21.2	- 0.3	17 22 18.2	+ 0.3	59.5	29.53	58.0	+ 0 17.6	55.2	.....	+ 38 38 20.2
	(g) $\zeta$ Aquilæ. ....	16.0	21.2	0.0	42 22 18.5	0.0	.....	.....	.....	+ 0 51.3	57.3	.....	+ 13 37 46.5
	Mercury Centre. ....	5.8	9.5	+ 0.1	46 30 7.7	.....	52.5	29.11	53.3	+ 0 59.2	.....	55.6	+ 9 29 48.7
Sept. 12	$\alpha$ Ursæ Majoris. ....	3.5	9.8	- 0.6	353 24 6.1	.....	.....	.....	.....	- 0 6.6	55.4	.....	+ 62 36 56.1
Sept. 13	(h) Sun South L. ....	36.9	40.4	+ 0.1	52 17 38.9	+ 0.8	.....	.....	.....	+ 1 12.6	.....	.....	+ 3 42 3.3
	(i) Sun North L. ....	50.5	55.0	+ 0.1	51 45 52.8	- 1.6	53.1	29.12	53.8	+ 1 11.2	.....	.....	+ 4 13 53.2
	$\gamma$ Ursæ Majoris. ....	37.6	42.5	- 0.5	1 25 39.5	.....	.....	.....	.....	+ 0 1.3	55.9	.....	+ 54 35 14.8
	(k) 12 Canum Venat. ....	21.9	26.1	- 0.3	16 49 23.7	+ 0.8	.....	.....	.....	+ 0 16.9	55.9	.....	+ 39 11 14.2
	(l) $\alpha$ Ursæ Minoris S. P.	45.1	51.3	0.0	324 28 48.3	- 0.3	.....	.....	.....	- 0 40.2	55.1	.....	+ 88 27 12.2
	Venus North L. ....	50.9	54.2	+ 0.1	70 15 52.6	.....	54.5	29.12	54.7	+ 2 34.7	.....	.....	- 14 17 31.7
	Uranus. ....	52.0	54.6	+ 0.1	62 57 53.5	.....	46.9	29.07	50.9	+ 1 50.9	.....	.....	- 6 58 48.8
Sept. 16	(m) $\alpha$ Pegasi. ....	15.3	21.4	0.0	41 39 18.4	+ 0.1	52.7	28.94	53.0	+ 0 49.7	55.2	55.2	.....
Sept. 17	$\alpha$ Bootis. ....	58.2	63.5	0.0	35 59 0.9	.....	55.8	28.93	54.8	+ 0 40.3	57.9	56.6	+ 20 1 15.4
	$\beta$ Ursæ Minoris. ....	25.0	31.4	- 0.4	341 12 27.7	.....	55.0	.....	.....	- 0 19.0	54.3	.....	+ 74 48 47.9
	$\delta$ Aquilæ. ....	37.8	41.4	+ 0.1	53 11 39.6	.....	51.8	28.97	53.5	+ 1 14.8	57.5	.....	+ 2 48 2.2
	Uranus. ....	30.3	32.1	+ 0.1	63 1 31.2	.....	49.0	28.95	51.9	+ 1 50.2	.....	.....	- 7 2 24.8
Sept. 18	$\gamma$ Aquilæ. ....	14.1	20.0	+ 0.1	45 46 17.1	.....	.....	.....	.....	+ 0 57.9	57.3	56.2	+ 10 13 41.2
	$\alpha$ Aquilæ. ....	49.6	54.5	+ 0.1	47 32 52.3	.....	49.9	29.02	53.2	+ 1 1.6	56.1	.....	+ 8 27 2.3
	$\alpha^2$ Capricorni. ....	41.3	45.5	+ 0.1	69 0 43.5	.....	.....	.....	.....	+ 2 25.5	55.7	.....	- 13 2 12.8
	$\lambda$ Ursæ Minoris. ....	40.3	45.7	0.0	327 11 42.9	.....	51.0	29.01	52.9	- 0 36.4	55.5	.....	+ 88 49 49.7
	Uranus. ....	23.3	25.9	+ 0.1	63 2 24.6	.....	49.8	29.01	52.2	+ 1 50.4	.....	.....	- 7 3 18.8
Sept. 19	(n) Sun North L. ....	40.1	45.1	+ 0.1	54 4 42.7	- 1.1	55.1	29.05	54.0	+ 1 16.9	.....	56.3	+ 1 54 57.8
	(f) $\alpha^2$ Capricorni. ....	41.8	46.5	+ 0.1	69 0 44.2	- 0.5	50.3	29.11	52.7	+ 2 26.1	56.5	.....	- 13 2 13.5
	$\pi$ Capricorni. ....	30.2	34.9	+ 0.1	74 41 32.6	.....	.....	.....	.....	+ 3 23.1	.....	.....	- 18 43 59.4
	(o) $\lambda$ Ursæ Minoris. ....	39.5	44.9	0.0	327 11 42.1	+ 0.3	.....	.....	.....	- 0 36.6	55.0	.....	+ 88 49 50.5
	(b) $\alpha$ Cygni. ....	56.7	61.0	- 0.4	11 17 58.6	0.0	.....	.....	.....	+ 0 11.3	57.1	.....	+ 44 42 46.4
	(p) Moon South L. ....	20.2	25.0	+ 0.1	77 29 22.7	+ 11.9	.....	.....	.....	+ 4 8.8	.....	.....	- 21 32 47.1
	$\zeta$ Cygni. ....	56.8	62.2	- 0.2	26 25 59.2	.....	49.8	29.11	52.3	+ 0 28.1	56.5	.....	+ 29 34 29.0
Sept. 20	(g) $\lambda$ Ursæ Minoris. ....	35.4	40.5	0.0	327 11 37.9	+ 6.0	.....	.....	.....	- 0 36.8	56.6	56.6	+ 88 49 49.5
	(r) $\alpha$ Cygni. ....	54.9	59.8	- 0.4	11 17 57.1	+ 1.9	50.0	29.24	52.4	+ 0 11.3	57.7	.....	+ 44 42 46.3
	$\zeta$ Cygni. ....	56.2	60.9	- 0.2	26 25 58.3	.....	.....	.....	.....	+ 0 28.2	55.8	.....	+ 29 34 30.1
	$\alpha$ Cephei. ....	22.0	26.8	- 0.6	354 6 23.7	.....	50.0	29.25	52.4	- 0 5.9	56.4	.....	+ 61 54 38.8
	Moon South L. ....	21.8	26.0	+ 0.1	71 59 24.0	.....	.....	.....	.....	+ 2 52.5	.....	.....	- 16 1 19.9
	(f) $\delta$ Aquarii. ....	35.9	38.9	+ 0.1	64 33 37.5	- 0.4	50.7	29.25	52.4	+ 1 58.6	.....	.....	- 8 34 39.1
	$\sigma$ Aquarii. ....	20.8	25.1	+ 0.1	67 28 23.1	.....	.....	.....	.....	+ 2 15.8	.....	.....	- 11 29 42.3
	Mercury Centre. ....	4.0	9.1	+ 0.1	47 9 6.7	.....	.....	.....	.....	+ 1 1.0	.....	57.4	+ 8 50 49.7
	$\alpha$ Ursæ Majoris. ....	7.5	14.0	- 0.6	353 24 10.2	.....	51.4	29.25	52.9	- 0 6.6	56.8	.....	+ 62 36 53.8
	(s) Sun North L. ....	14.7	18.3	+ 0.1	54 51 16.5	+ 0.3	52.0	29.25	53.0	+ 1 20.2	.....	.....	+ 1 8 20.4
Sept. 21	(f) Venus North L. ....	8.1	12.0	+ 0.1	70 50 10.1	- 0.5	52.8	29.24	53.2	+ 2 40.9	.....	.....	- 14 51 53.1
	$\eta$ Ursæ Majoris. ....	46.5	52.0	- 0.5	5 53 48.8	.....	.....	.....	.....	+ 0 5.8	56.7	.....	+ 50 7 2.8
	$\alpha$ Bootis. ....	59.2	64.7	0.0	35 59 2.0	.....	54.0	29.23	53.7	+ 0 40.9	59.1	.....	+ 20 1 14.5
	$\lambda$ Ursæ Minoris. ....	41.5	47.2	0.0	327 11 44.3	.....	49.8	29.23	52.9	- 0 36.8	57.2	.....	+ 88 49 49.9

(a) At 12<sup>h</sup> 46<sup>m</sup> 20<sup>s</sup>.

(b) At Wire IV.

(c) At 8<sup>h</sup> 43<sup>m</sup> 30<sup>s</sup>.(d) At 8<sup>h</sup> 45<sup>m</sup> 0<sup>s</sup>.

(e) 45' after transit.

(f) At Wire V.

(g) At 18<sup>h</sup> 59<sup>m</sup> 35<sup>s</sup>.(h) At 11<sup>h</sup> 22<sup>m</sup> 50<sup>s</sup>.(i) At 11<sup>h</sup> 24<sup>m</sup> 35<sup>s</sup>.(k) At 12<sup>h</sup> 49<sup>m</sup> 50<sup>s</sup>.(l) At 13<sup>h</sup> 0<sup>m</sup> 25<sup>s</sup>.(m) At 22<sup>h</sup> 58<sup>m</sup> 28<sup>s</sup>.(n) At 11<sup>h</sup> 45<sup>m</sup> 55<sup>s</sup>.(o) At 20<sup>h</sup> 25<sup>m</sup> 30<sup>s</sup>.(p) At 20<sup>h</sup> 59<sup>m</sup> 32<sup>s</sup>; cloudy.(q) At 20<sup>h</sup> 35<sup>m</sup> 0<sup>s</sup>.(r) At 20<sup>h</sup> 38<sup>m</sup> 6<sup>s</sup>.(s) At 11<sup>h</sup> 52<sup>m</sup> 16<sup>s</sup>.

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.										observed.	adopted.	
Sept. 21	$\theta$ Aquarii.....	34.8	37.8	+0.1	64	33	36.5	.....	49.0	29.21	50.7	+1 58.9	.....	57.4	- 8 34 38.0
	$\sigma$ Aquarii.....	18.5	23.5	+0.1	67	28	21.2	.....	.....	.....	.....	+2 16.2	.....	.....	- 11 29 40.0
	Moon South L.....	35.1	39.5	+0.1	65	28	37.5	.....	.....	.....	.....	+2 4.0	.....	.....	- 9 29 44.1
	Uranus.....	0.9	3.8	+0.1	63	5	2.4	.....	.....	.....	.....	+1 51.7	.....	.....	- 7 5 56.7
	$\phi$ Aquarii.....	39.2	41.1	+0.1	62	53	40.3	.....	48.1	29.20	50.0	+1 50.8	.....	.....	- 6 54 33.7
	$\pi^1$ Piscium.....	38.8	42.5	+0.1	55	36	40.7	.....	.....	.....	.....	+1 23.0	.....	.....	+ 0 22 53.7
Sept. 22	(a) $\alpha$ Pegasi.....	15.9	20.9	0.0	41	39	18.4	- 0.1	49.0	29.37	51.3	+0 50.8	56.9	57.5	+ 14 20 48.4
	Uranus.....	53.0	55.0	+0.1	63	5	54.1	.....	.....	.....	.....	+1 52.2	.....	.....	- 7 6 48.8
	$\phi$ Aquarii.....	40.0	40.0	+0.1	62	53	40.2	.....	.....	.....	.....	+1 51.2	.....	.....	- 6 54 33.9
	$\pi^1$ Piscium.....	39.2	42.1	+0.1	55	36	40.7	.....	.....	.....	.....	+1 23.4	.....	.....	+ 0 22 53.4
	$\iota$ Piscium.....	5.5	11.0	+0.1	51	14	8.4	.....	.....	.....	.....	+1 11.2	57.8	.....	+ 4 45 37.9
	(b) Moon South L.....	5.5	9.0	+0.1	58	19	7.4	- 5.7	.....	.....	.....	+1 32.5	.....	.....	- 2 19 36.7
	(c) Moon North L.....	29.3	32.5	+0.1	57	45	31.0	+ 20.7	.....	.....	.....	+1 30.5	.....	.....	- 1 46 24.7
	$\omega$ Piscium.....	3.0	8.4	+0.1	50	1	5.6	.....	.....	.....	.....	+1 8.2	.....	.....	+ 5 58 43.7
	$\alpha$ Andromedæ.....	56.2	61.5	-0.1	27	47	58.9	.....	.....	.....	.....	+0 30.2	57.7	.....	+ 28 12 28.4
	$\delta^1$ Piscium.....	39.6	44.1	+0.1	48	41	41.9	.....	48.0	29.37	49.9	+1 5.1	.....	.....	+ 7 18 10.5
	$\alpha$ Ursæ Majoris.....	7.2	13.3	-0.6	353	24	9.7	.....	.....	.....	.....	-0 6.7	55.5	57.0	+ 62 36 54.0
	Mercury Centre.....	17.0	20.7	+0.1	47	57	18.8	.....	52.6	29.42	52.5	+1 3.0	.....	.....	+ 8 2 35.2
Sept. 23	Sun South L.....	52.0	56.2	+0.1	56	9	54.2	.....	54.5	29.43	53.0	+1 24.3	.....	.....	- 0 10 21.5
	Venus North L.....	16.8	21.6	+0.1	70	45	19.3	.....	.....	.....	.....	+2 40.7	.....	.....	- 14 47 3.0
	$\alpha$ Ursæ Minoris S. P.....	50.5	56.8	0.0	324	28	53.7	.....	54.2	29.44	53.5	-0 40.6	56.7	.....	+ 88 27 16.1
	$\alpha$ Serpentis.....	42.9	49.4	+0.1	49	3	46.3	.....	55.4	29.42	54.0	+1 5.0	56.2	.....	+ 6 56 5.7
	$\delta$ Ophiuchi.....	56.6	61.1	+0.1	59	15	58.9	.....	55.5	29.43	53.9	+1 34.7	57.7	.....	- 3 16 36.6
	Moon North L.....	47.0	51.2	+0.1	50	22	49.3	.....	49.0	29.45	52.5	+1 9.2	.....	.....	+ 5 36 58.5
	(d) $\epsilon$ Piscium.....	5.0	9.8	+0.1	48	58	7.6	- 0.2	.....	.....	.....	+1 5.9	.....	.....	+ 7 1 43.7
	$\alpha$ Ursæ Minoris.....	15.9	22.5	-0.1	327	34	19.1	.....	48.0	29.45	51.9	-0 36.7	59.0	.....	+ 88 27 14.6
	$\eta$ Piscium.....	50.5	56.0	0.0	41	28	53.3	.....	.....	.....	.....	+0 50.8	.....	.....	+ 14 31 12.9
	(d) Juno.....	36.0	38.7	+0.1	55	26	37.4	- 0.7	.....	.....	.....	+1 23.2	.....	.....	+ 0 32 57.1
	(e) Sun North L.....	20.8	24.6	+0.1	56	1	22.7	- 0.5	56.6	29.35	54.4	+1 23.2	.....	57.0	- 0 1 48.4
	(f) $\alpha$ Ursæ Minoris S. P.....	51.9	59.0	0.0	324	28	55.5	- 1.2	.....	.....	.....	-0 40.3	57.2	.....	+ 88 27 17.0
Sept. 24	(g) $\alpha$ Aquarii.....	8.3	13.3	+0.1	57	5	10.9	- 0.7	56.0	29.22	54.5	+1 26.4	56.8	.....	- 1 5 39.6
	$\alpha$ Andromedæ.....	55.9	61.8	-0.1	27	47	58.9	.....	55.0	29.21	55.4	+0 29.6	57.5	.....	+ 28 12 28.5
	(a) $\gamma$ Pegasi.....	21.8	28.1	0.0	41	42	24.8	- 0.1	.....	.....	.....	+0 50.0	56.7	.....	+ 14 17 42.3
	(h) $\alpha$ Ursæ Minoris.....	11.5	18.4	-0.1	327	34	14.9	+ 1.0	55.0	29.21	55.2	-0 35.8	57.0	.....	+ 88 27 16.9
	Mercury Centre.....	34.2	37.9	+0.1	48	57	36.3	.....	56.2	29.04	55.8	+1 3.9	.....	57.0	+ 7 2 16.8
	$\eta$ Ursæ Majoris.....	47.1	53.0	-0.5	5	53	49.6	.....	56.9	29.12	56.0	+0 5.7	56.2	.....	+ 50 7 1.7
	$\eta$ Bootis.....	54.2	60.1	0.0	36	47	57.3	.....	.....	.....	.....	+0 41.7	58.5	.....	+ 19 12 18.0
	$\alpha$ Bootis.....	57.2	62.9	0.0	35	59	0.1	.....	56.9	29.13	55.9	+0 40.5	56.2	.....	+ 20 1 16.4
	(d) Mercury Centre.....	30.2	36.2	+0.1	49	31	33.2	- 1.2	55.9	29.24	55.5	+1 5.7	.....	56.0	+ 6 28 18.3
	$\gamma$ Ursæ Majoris.....	41.0	46.4	-0.5	1	25	43.2	.....	.....	.....	.....	+0 1.3	55.4	.....	+ 54 35 11.5
	Sun South L.....	2.0	5.9	+0.1	57	20	4.0	.....	55.2	29.24	55.4	+1 27.4	.....	.....	- 1 20 35.4
	(i) 12 Canum Venat.....	26.4	30.8	-0.3	16	49	28.3	+ 0.5	.....	.....	.....	+0 16.9	57.1	.....	+ 39 11 10.3
Sept. 25	(d) Venus North L.....	2.7	7.5	+0.1	70	27	5.1	- 0.3	.....	.....	.....	+2 36.5	.....	.....	- 14 28 45.3
	(d) $\alpha$ Ursæ Minoris S. P.....	50.6	55.9	0.0	324	28	53.3	.....	56.1	29.26	56.3	-0 40.2	55.6	.....	+ 88 27 17.1
	(k) $\beta$ Cephei.....	27.8	33.0	-0.5	346	9	29.9	+ 0.7	50.2	29.07	53.3	-0 14.0	56.1	56.7	+ 69 51 40.1
	$\epsilon$ Pegasi.....	12.4	17.2	+0.1	46	51	14.8	.....	.....	.....	.....	+1 0.2	56.0	.....	+ 9 8 41.7
	$\alpha$ Aquarii.....	7.5	13.0	+0.1	57	5	10.3	.....	.....	.....	.....	+1 27.0	57.6	.....	- 1 5 40.6
	$\alpha$ Ursæ Minoris.....	11.8	17.8	-0.1	327	34	14.7	.....	48.8	29.04	50.0	-0 36.1	57.1	.....	+ 88 27 18.1
	Juno.....	49.8	53.0	+0.1	56	33	51.6	.....	49.0	29.05	50.3	+1 25.5	.....	.....	- 0 34 20.4
	$\alpha$ Aurigæ.....	20.0	24.2	-0.2	26	27	21.8	.....	42.0	29.47	49.0	+0 29.0	.....	57.5	+ 29 33 6.7
	$\mu$ Geminorum.....	47.9	51.8	-0.1	33	24	49.8	.....	.....	.....	.....	+0 38.4	59.3	.....	+ 22 35 29.3
	(a) At Wire IV.....	enlightened; correction for			defect of illumination 0".5.			(c) At Wire IV.; very tremulous.			(h) At 0 <sup>h</sup> 59 <sup>m</sup> 0 <sup>s</sup> .			(i) 1 <sup>m</sup> after transit.	
	(b) At 23 <sup>h</sup> 40 <sup>m</sup> 45 <sup>s</sup> .....	(d) At Wire V.			(f) At 12 <sup>h</sup> 58 <sup>m</sup> 30 <sup>s</sup> .....			(g) At 21 <sup>h</sup> 59 <sup>m</sup> 26 <sup>s</sup> .....			(k) At 21 <sup>h</sup> 28 <sup>m</sup> 40 <sup>s</sup> .....				
	(c) At 23 <sup>h</sup> 42 <sup>m</sup> 18 <sup>s</sup> ; not fully														



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.										observed.	adopted.	
Sept. 29	51 (Hev.) Cephei.....	53.8	59.2	-0.1	328	45	56.3	.....	.....	.....	.....	-0 35.5	57.4	57.5	+87 15 36.7
	(a) $\delta$ Ursæ Minoris S. P.	21.0	24.1	+0.1	322	37	22.5	- 0.4	.....	.....	.....	-0 44.7	58.4	.....	+86 35 39.9
	$\epsilon$ Geminorum .....	13.6	16.9	-0.1	30	43	15.2	.....	.....	.....	.....	+0 34.6	.....	.....	+25 17 7.7
	$\alpha$ Canis Majoris.....	35.5	39.4	+0.1	72	27	37.7	.....	.....	.....	.....	+3 2.0	56.2	.....	-16 29 42.2
	Moon South L.....	34.1	38.0	-0.1	28	59	36.0	.....	.....	.....	.....	+0 32.3	.....	.....	+27 0 49.2
	$\delta$ Geminorum .....	51.3	56.1	-0.1	33	43	53.7	.....	42.4	29.48	45.8	+0 38.9	56.9	.....	+22 16 24.9
	$\epsilon$ Geminorum.....	40.0	45.8	-0.1	27	53	42.9	.....	.....	.....	.....	+0 30.8	.....	.....	+28 6 43.8
	$\beta$ Geminorum.....	51.5	57.0	-0.1	27	35	54.1	.....	42.9	29.50	45.9	+0 30.4	56.6	.....	+28 24 33.0
Oct. 1	(b) Mercury Centre .....	17.8	22.0	+0.1	53	32	19.9	+ 1.4	48.9	29.17	50.0	+1 16.7	.....	57.2	+ 2 27 19.2
Oct. 2	Sun South L. ....	13.0	16.5	+0.1	59	40	14.8	.....	50.0	29.17	50.6	+1 36.5	.....	.....	- 3 40 54.1
	12 Canum Venat.....	29.5	32.2	-0.3	16	49	30.6	.....	.....	.....	.....	+0 17.1	57.5	.....	+39 11 9.5
	$\alpha$ Ursæ Minoris S. P.	53.4	60.0	0.0	324	28	56.8	.....	.....	.....	.....	-0 40.6	56.4	.....	+88 27 19.0
	(c) $\eta$ Bootis.....	56.5	60.9	0.0	36	47	58.8	- 0.1	50.4	29.18	50.8	+0 42.4	59.5	.....	+19 12 16.1
	(d) $\epsilon$ Bootis.....	8.9	14.2	-0.1	28	15	11.4	- 0.1	50.4	29.20	51.0	+0 30.5	57.4	.....	+27 45 15.4
	$\lambda$ Ursæ Minoris.....	38.8	43.8	0.0	327	11	41.2	.....	45.0	29.31	48.9	-0 37.3	55.9	.....	+88 49 53.3
	Uranus.....	7.5	9.4	+0.1	63	14	8.6	.....	43.5	29.32	45.3	+1 54.1	.....	.....	- 7 15 5.5
	$\alpha$ Ursæ Minoris .....	10.7	16.5	-0.1	327	34	13.5	.....	43.4	29.36	45.0	-0 36.9	56.6	.....	+88 27 20.6
	Juno .....	53.3	56.8	+0.1	57	28	55.2	.....	43.7	29.35	45.1	+1 30.4	.....	.....	- 1 29 28.4
Oct. 3	Sun North L.....	30.6	33.5	+0.1	59	31	32.1	.....	50.7	29.44	50.0	+1 36.8	.....	56.7	- 3 32 12.2
	$\alpha$ Ursæ Minoris S. P.	54.2	60.3	0.0	324	28	57.3	.....	.....	.....	.....	-0 40.9	56.2	.....	+88 27 19.7
	$\zeta$ Ursæ Majoris.....	3.0	7.3	-0.5	0	15	4.6	.....	.....	.....	.....	+0 0.2	57.2	.....	+55 45 51.9
Oct. 4	$\eta$ Draconis .....	11.0	16.8	-0.6	354	8	13.4	.....	47.8	29.55	49.6	-0 6.0	57.6	57.1	+61 52 49.7
	$\zeta$ Cygni.....	54.2	58.0	-0.2	26	25	55.8	.....	42.8	29.68	47.5	+0 29.1	56.2	.....	+29 34 32.2
	$\alpha$ Cephei.....	19.2	24.0	-0.6	354	6	20.9	.....	.....	.....	.....	-0 6.1	56.9	.....	+61 54 42.2
	Uranus.....	39.0	41.0	+0.1	63	15	40.1	.....	41.9	29.73	46.7	+1 56.1	.....	.....	- 7 16 39.1
	$\alpha$ Ursæ Minoris.....	11.6	17.3	-0.1	327	34	14.4	.....	41.0	29.76	44.5	-0 37.6	57.6	.....	+88 27 20.3
	Juno .....	34.2	38.2	+0.1	57	56	36.2	.....	40.9	29.76	44.0	+1 33.9	.....	.....	- 1 57 13.0
	Mercury Centre.....	19.1	22.6	+0.1	55	46	20.9	.....	45.3	29.91	46.7	+1 26.1	.....	57.5	+ 0 13 10.5
	Venus North L. ....	15.6	19.6	+0.1	68	17	17.6	.....	.....	.....	.....	+2 26.2	.....	.....	-12 18 46.3
Oct. 5	Sun South L.....	52.8	56.0	+0.1	60	49	54.5	.....	45.8	29.90	47.0	+1 44.6	.....	.....	- 4 50 41.6
	$\alpha$ Ursæ Minoris S. P.	56.6	62.3	0.0	324	28	59.5	.....	.....	.....	.....	-0 42.0	56.5	.....	+88 27 20.0
	$\zeta$ Ursæ Majoris.....	2.9	8.0	-0.5	0	15	4.9	.....	.....	.....	.....	+0 0.2	56.7	.....	+55 45 52.4
	$\eta$ Ursæ Majoris.....	52.1	56.2	-0.5	5	53	53.7	.....	.....	.....	.....	+0 6.0	57.7	.....	+50 6 57.8
	$\alpha$ Bootis .....	0.1	4.9	0.0	35	59	2.6	.....	47.4	29.91	48.0	+0 42.4	59.0	.....	+20 1 12.5
	Uranus.....	25.0	26.3	+0.1	63	16	25.7	.....	44.0	29.98	46.5	+1 56.7	.....	.....	- 7 17 24.9
	$\alpha$ Ursæ Minoris .....	10.9	17.1	-0.1	327	34	13.9	.....	43.0	29.98	44.8	-0 37.7	57.4	.....	+88 27 21.3
	Juno .....	25.5	29.5	+0.1	58	10	27.6	.....	43.0	29.98	45.0	+1 35.0	.....	.....	- 2 11 5.1
Oct. 7	(d) Sun North L.....	2.5	6.4	+0.1	61	4	4.6	- 0.5	52.4	29.84	51.7	+1 43.9	.....	57.3	- 5 4 50.7
	$\beta$ Draconis .....	20.1	26.3	-0.5	3	35	22.7	.....	52.0	29.74	52.0	+0 3.6	57.0	.....	+52 25 31.0
	$\gamma$ Draconis .....	2.8	9.0	-0.5	4	30	5.4	.....	.....	.....	.....	+0 4.5	56.9	.....	+51 30 47.4
	$\alpha$ Aquarii.....	6.1	11.0	+0.1	57	5	8.6	.....	49.5	29.64	50.0	+1 28.8	57.9	.....	- 1 5 40.1
Oct. 8	$\beta$ Aquarii.....	24.3	28.0	+0.1	62	15	26.2	.....	51.0	29.50	51.4	+1 48.3	56.3	56.9	- 6 16 17.6
	$\epsilon$ Pegasi.....	12.5	17.5	+0.1	46	51	15.0	.....	.....	.....	.....	+1 1.0	57.6	.....	+ 9 8 40.9
	$\alpha$ Aquarii.....	5.9	11.0	+0.1	57	5	8.5	.....	.....	.....	.....	+1 28.1	57.1	.....	- 1 5 39.7
	(e) $\alpha$ Ursæ Minoris .....	55.3	62.0	-0.1	327	33	58.6	+12.2	49.0	29.45	50.4	-0 36.6	56.5	.....	+88 27 22.7
	Juno .....	39.9	43.0	+0.1	58	51	41.5	.....	.....	.....	.....	+1 34.6	.....	.....	- 2 52 19.2
Oct. 9	Sun South L. ....	0.5	4.0	+0.1	62	22	2.2	.....	54.6	29.30	53.5	+1 47.2	.....	57.4	- 6 22 52.0
	$\alpha$ Cephei .....	17.4	23.0	-0.6	354	6	19.5	.....	49.0	29.28	51.2	-0 6.0	56.7	.....	+61 54 43.9
	$\beta$ Aquarii.....	27.0	30.0	+0.1	62	15	28.6	.....	.....	.....	.....	+1 47.9	58.3	.....	- 6 16 19.1
	(f) $\beta$ Cephei .....	26.1	32.5	-0.5	346	9	28.8	+ 0.4	.....	.....	.....	-0 14.1	57.3	.....	+69 51 42.3

(a) At 6<sup>h</sup> 27<sup>m</sup> 0<sup>s</sup>.

(b) At Wire I.

(c) 30<sup>s</sup> after transit.

(d) At Wire IV.

(e) At 1<sup>h</sup> 18<sup>m</sup> 15<sup>s</sup>; tremulous.(f) 40<sup>s</sup> before transit.

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.	
		I.	II.										observed.	adopted.		
Oct. 9	Venus North L. ....	7.0	11.4	+0.1	66	30	9.3	.....	54.9	29.04	52.5	+2 7.6	.....	56.8	- 10 31 20.1	
	(a) $\alpha$ Ursæ Minoris S.P.	0.0	6.8	0.0	324	29	3.5	- 4.6	.....	.....	.....	- 0 40.0	56.0	.....	+ 88 27 22.1	
Oct. 10	Sun North L. ....	48.8	52.5	+0.1	62	12	50.9	.....	55.7	29.06	53.2	+1 45.4	.....	.....	- 6 13 39.5	
	$\beta$ Cephei .....	25.9	31.8	-0.5	346	9	28.4	.....	52.3	29.15	52.9	- 0 14.0	56.8	.....	+ 69 51 42.4	
	$\epsilon$ Pegasi .....	12.2	18.1	+0.1	46	51	15.2	.....	.....	.....	.....	+1 0.1	57.0	.....	+ 9 8 41.5	
	$\alpha$ Aquarii .....	7.2	12.9	+0.1	57	5	10.1	.....	.....	.....	.....	+1 26.9	57.5	.....	- 1 5 40.2	
	Uranus .....	5.5	9.4	+0.1	63	20	7.5	.....	52.3	29.18	52.9	+1 51.8	.....	.....	- 7 21 2.5	
	Juno .....	51.0	55.0	+0.1	59	18	53.2	.....	52.7	29.21	52.7	+1 34.8	.....	.....	- 3 19 31.2	
	Venus North L. ....	17.9	21.3	+0.1	66	7	19.6	.....	57.2	29.32	53.9	+2 6.0	.....	56.3	- 10 8 29.3	
	(b) $\alpha$ Ursæ Minoris S.P.	58.0	63.5	0.0	324	29	0.8	- 1.6	.....	.....	.....	- 0 40.2	55.7	.....	+ 88 27 22.7	
	Sun South L. ....	37.1	38.4	+0.1	63	7	38.0	.....	57.0	29.34	55.1	+1 50.3	.....	.....	- 7 8 32.0	
	$\eta$ Ursæ Majoris .....	52.9	58.2	-0.5	5	53	55.1	.....	.....	.....	.....	+0 5.8	57.0	.....	+ 50 6 55.4	
Oct. 11	$\beta$ Ursæ Minoris .....	34.1	40.1	-0.4	341	12	36.8	.....	56.9	29.35	55.4	- 0 19.2	56.1	.....	+ 74 48 38.7	
	(c) Uranus .....	24.2	27.3	+0.1	63	21	25.8	- 0.8	48.1	29.67	51.9	+1 54.8	.....	57.6	- 7 22 22.2	
Oct. 12	$\epsilon$ Piscium .....	4.0	8.5	+0.1	51	14	6.4	.....	.....	.....	.....	+1 11.9	57.5	.....	+ 4 45 39.3	
	(d) $\gamma$ Cephei .....	47.6	53.2	-0.4	339	16	49.9	+ 0.4	.....	.....	.....	- 0 22.0	57.1	.....	+ 76 44 29.3	
	(e) $\alpha$ Andromedæ .....	52.8	58.0	-0.1	27	47	55.4	- 0.1	48.8	29.69	51.5	+0 30.5	58.1	.....	+ 28 12 31.8	
	$\alpha$ Ursæ Minoris .....	7.8	14.4	-0.1	327	34	11.0	.....	47.0	29.70	50.8	- 0 37.1	57.8	.....	+ 88 27 23.7	
	(e) Juno .....	28.1	31.9	+0.1	59	45	30.1	- 0.4	47.3	.....	.....	+1 39.2	.....	.....	- 3 46 11.3	
	$\alpha$ Coronæ borealis ....	52.4	57.8	-0.1	28	44	55.0	.....	54.5	29.55	52.6	+0 31.2	57.5	56.9	+ 27 15 30.7	
	$\alpha$ Serpentis .....	44.5	50.1	+0.1	49	3	47.5	.....	.....	.....	.....	+1 5.5	56.4	.....	+ 6 56 3.9	
Oct. 13	$\zeta$ Ursæ Minoris .....	10.8	16.1	-0.3	337	44	13.2	.....	.....	.....	.....	- 0 23.4	56.9	.....	+ 78 17 7.1	
	$\theta$ Draconis .....	11.7	16.5	-0.6	357	1	13.4	.....	.....	.....	.....	- 0 3.0	.....	.....	+ 58 59 46.5	
	Sun North L. ....	29.5	32.0	+0.1	64	5	30.8	.....	50.9	29.46	51.0	+1 57.0	.....	57.7	- 8 6 30.1	
	$\eta$ Ursæ Majoris .....	53.9	59.0	-0.5	5	53	56.0	.....	.....	.....	.....	+0 5.9	56.7	.....	+ 50 6 55.8	
Oct. 15	$\eta$ Bootis .....	57.5	61.5	0.0	36	47	59.6	.....	.....	.....	.....	+0 42.7	58.4	.....	+ 19 12 15.4	
	$\alpha$ Piscis Australis .....	52.8	55.5	+0.2	86	16	54.2	.....	47.0	29.41	49.5	+12 8.6	.....	.....	- 30 28 5.1	
	(f) $\alpha$ Pegasi .....	12.9	19.0	0.0	41	39	16.0	- 0.1	.....	.....	.....	+0 51.1	57.2	.....	+ 14 20 50.7	
	(g) Uranus .....	20.9	23.5	+0.1	63	23	22.4	- 1.1	.....	.....	.....	+1 54.3	.....	.....	- 7 24 17.9	
	$\alpha$ Ursæ Minoris .....	7.4	13.2	-0.1	327	34	10.2	.....	44.9	29.40	48.0	- 0 36.9	58.4	.....	+ 88 27 24.4	
	Juno .....	20.4	23.0	+0.1	60	24	21.8	.....	45.0	.....	.....	+1 41.3	.....	.....	- 4 25 5.4	
	(h) Venus South L. ....	28.0	30.2	+0.1	64	14	29.2	0.0	51.0	29.45	50.2	+1 57.7	.....	57.6	- 8 15 29.3	
	(i) Venus North L. ....	35.9	....	+0.1	63	51	37.0	- 0.3	.....	.....	.....	+1 57.3	.....	57.6	- 7 52 36.4	
	Venus South L. ....	35.0	37.2	+0.1	63	52	36.3	.....	49.8	29.75	50.4	+1 57.3	.....	.....	- 7 53 36.0	
	(k) $\alpha$ Ursæ Minoris S.P.	2.5	8.0	0.0	324	29	5.3	- 1.7	50.9	.....	.....	- 0 41.4	56.5	.....	+ 88 27 24.6	
Oct. 16	(l) $\zeta$ Ursæ Majoris .....	6.0	11.3	-0.5	0	15	8.1	+ 0.8	.....	.....	.....	+0 0.2	56.9	.....	+ 55 45 48.5	
	$\eta$ Ursæ Majoris .....	54.8	60.2	-0.5	5	53	57.1	.....	.....	.....	.....	+0 5.9	57.1	.....	+ 50 6 54.6	
Oct. 17	$\eta$ Bootis .....	58.0	62.9	0.0	36	48	0.6	.....	50.9	29.77	51.1	+0 43.2	59.5	.....	+ 19 12 13.8	
	Moon South L. ....	57.5	62.2	+0.1	74	40	59.9	.....	48.1	29.84	50.8	+3 29.1	.....	.....	- 18 43 31.4	
	$\delta$ Capricorni .....	54.5	57.9	+0.1	72	48	56.2	.....	.....	.....	.....	+3 5.8	.....	.....	- 16 51 4.4	
	$\epsilon$ Aquarii .....	50.4	54.0	+0.1	70	36	52.2	.....	.....	.....	.....	+2 43.8	.....	.....	- 14 38 38.4	
	$\alpha$ Ursæ Minoris .....	6.4	12.6	-0.1	327	34	9.4	.....	46.6	29.81	49.9	- 0 37.2	58.1	.....	+ 88 27 25.4	
	Juno .....	20.0	22.4	+0.1	60	49	21.3	.....	46.0	.....	.....	+1 44.2	.....	.....	- 4 50 7.9	
	(m) Venus South L. ....	16.3	19.2	+0.1	63	31	17.8	- 0.3	.....	.....	.....	+1 56.4	.....	57.0	- 7 32 16.9	
	(n) Venus North L. ....	20.9	23.2	+0.1	63	30	22.1	.....	45.2	29.68	49.2	+1 56.4	.....	.....	- 7 31 21.5	
	$\alpha$ Ursæ Minoris S.P.	1.4	7.2	0.0	324	29	4.4	.....	.....	.....	.....	- 0 41.7	56.7	.....	+ 88 27 25.7	
	Sun South L. ....	47.2	50.8	+0.1	65	43	49.2	.....	45.5	29.66	48.7	+2 8.3	.....	.....	- 9 45 0.5	
	(c) $\alpha$ Bootis .....	1.8	6.6	0.0	35	59	4.3	- 0.1	45.7	.....	.....	+0 42.2	57.9	.....	+ 20 1 10.6	
	(o) $\beta$ Ursæ Minoris .....	38.0	43.2	-0.4	341	12	40.3	0.0	47.0	29.64	48.6	- 0 19.8	56.6	.....	+ 74 48 36.5	
	(a) At 12 <sup>h</sup> 53 <sup>m</sup> 45 <sup>s</sup> .		(c) At Wire IV.		(i) At Wire I.: correction				(k) At 13 <sup>h</sup> 8 <sup>m</sup> 50 <sup>s</sup> .				(n) Correction for defect of			
	(b) At 12 <sup>h</sup> 57 <sup>m</sup> 40 <sup>s</sup> .		(f) 10 <sup>s</sup> after transit.		for defect of illumina-				(l) At Wire V.				illumination 0 <sup>''</sup> .2.			
	(c) 1 <sup>m</sup> after transit.		(g) At 23 <sup>h</sup> 0 <sup>m</sup> 25 <sup>s</sup> .		tion 0 <sup>''</sup> .1.				(m) At Wire I.				(o) At 14 <sup>h</sup> 52 <sup>m</sup> 0 <sup>s</sup> .			
(d) At 23 <sup>h</sup> 34 <sup>m</sup> 20 <sup>s</sup> .		(h) At 12 <sup>h</sup> 15 <sup>m</sup> 36 <sup>s</sup> .														



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.		
		I.	II.										observed.	adopted.			
Oct. 18	$\epsilon$ Ursæ Minoris.....	53.2	53.9	-0.2	333	43	55.9	.....	47.6	29.62	49.4	-0 28.7	56.9	57.0	+82	17	29.8
	51 (Hev.) Cephei S.P.	15.2	21.5	+0.1	323	17	18.3	.....	.....	.....	.....	-0 43.4	57.7	.....	+87	15	37.9
	(a) $\delta$ Ursæ Minoris.....	49.0	55.0	-0.1	329	25	51.9	+ 0.6	46.2	29.63	49.0	-0 34.4	56.5	.....	+86	35	38.9
	(b) $\delta$ Capricorni.....	54.0	57.0	+0.1	72	48	55.7	- 0.8	45.0	29.64	48.3	+3 5.8	.....	.....	-16	51	3.7
	$\lambda$ Aquarii.....	49.7	53.1	+0.1	70	36	51.4	.....	.....	.....	.....	+2 43.8	.....	.....	-14	38	38.2
	Moon South L. ....	57.5	61.5	+0.1	68	47	59.7	.....	.....	.....	.....	+2 28.9	.....	.....	-12	49	31.6
	(c) 58 Aquarii.....	1.1	5.0	+0.1	67	42	3.0	- 0.8	.....	.....	.....	+2 20.9	.....	.....	-11	43	26.1
	(d) Venus South L. ....	36.0	37.1	+0.1	63	10	36.6	- 0.2	.....	.....	.....	+1 55.3	.....	57.9	- 7	11	33.8
	(e) Venus North L. ....	40.8	42.0	+0.1	63	9	41.5	+ 0.1	42.5	29.69	46.9	+1 55.3	.....	.....	- 7	10	39.0
	$\alpha$ Ursæ Minoris S.P.	2.4	8.0	0.0	324	29	5.3	.....	.....	.....	.....	-0 41.9	57.0	.....	+88	27	25.5
Oct. 19	$\zeta$ Ursæ Majoris.....	9.0	13.5	-0.5	0	15	10.7	.....	.....	.....	.....	+0 0.2	58.0	.....	+55	45	47.0
	Sun North L. ....	29.6	32.0	+0.1	65	33	31.0	.....	44.6	29.69	46.8	+2 7.6	.....	.....	- 9	34	40.7
	$\eta$ Ursæ Majoris.....	56.8	60.8	-0.5	5	53	58.4	.....	.....	.....	.....	+0 6.0	57.8	.....	+50	6	53.5
	(f) $\eta$ Bootis.....	59.7	64.1	0.0	36	48	2.0	- 0.1	.....	.....	.....	+0 43.6	60.8	.....	+19	12	12.4
	51 (Hev.) Cephei S.P.	16.0	20.3	+0.1	323	17	18.1	.....	.....	.....	.....	-0 43.6	57.2	.....	+87	15	36.6
	(g) $\delta$ Ursæ Minoris.....	50.4	56.3	-0.1	329	25	53.2	+ 0.2	45.7	29.70	48.7	-0 34.6	57.1	.....	+86	35	39.1
	$\lambda$ Aquarii.....	40.3	43.0	+0.1	64	24	41.8	.....	.....	.....	.....	+2 1.5	.....	.....	- 8	25	45.4
	$\alpha$ Piscis Australis.....	51.9	52.6	+0.2	86	16	52.3	.....	44.0	29.72	46.2	+12 22.3	.....	.....	-30	28	16.7
	Uranus.....	42.0	43.3	+0.1	63	25	42.7	.....	.....	.....	.....	+1 56.4	.....	.....	- 7	26	41.2
	(h) 96 Aquarii.....	55.6	59.9	+0.1	61	58	57.9	+ 0.1	.....	.....	.....	+1 49.5	.....	.....	- 5	59	49.6
Oct. 20	Moon South L. ....	25.0	28.6	+0.1	62	4	26.9	.....	.....	.....	.....	+1 50.0	.....	.....	- 6	5	19.0
	$\lambda$ Piscium.....	28.5	31.8	+0.1	55	5	30.2	.....	.....	.....	.....	+1 23.7	.....	.....	+ 0	54	4.0
	29 Piscium.....	16.1	19.3	+0.1	59	54	17.8	.....	43.4	29.72	45.6	+1 40.7	.....	.....	- 3	55	0.6
	$\alpha$ Ursæ Minoris.....	5.5	11.3	-0.1	327	34	8.3	.....	43.1	29.73	45.2	-0 37.4	57.5	.....	+88	27	27.0
	Juno.....	27.8	29.2	+0.1	61	13	28.7	.....	43.0	.....	.....	+1 46.4	.....	.....	- 5	14	17.2
	$\beta$ Pegasi.....	17.7	18.1	-0.1	28	47	17.7	.....	46.3	29.71	48.6	+0 32.0	56.4	58.3	+27	13	8.6
	$\lambda$ Piscium.....	29.1	32.2	+0.1	55	5	30.7	.....	.....	.....	.....	+1 23.2	.....	.....	+ 0	54	4.4
	29 Piscium.....	18.1	21.2	+0.1	59	54	19.8	.....	.....	.....	.....	+1 40.1	.....	.....	- 3	55	1.6
	$\alpha$ Andromedæ.....	52.8	57.1	-0.1	27	47	55.0	.....	.....	.....	.....	+0 30.7	59.3	.....	+28	12	32.6
	Moon South L. ....	26.3	28.7	+0.1	54	50	27.6	.....	46.1	29.72	48.5	+1 22.5	.....	.....	+ 1	9	8.2
Oct. 21	$\alpha$ Cassiopeæ.....	16.4	20.3	-0.5	0	21	17.8	.....	.....	.....	.....	+0 0.3	58.7	.....	+55	39	40.2
	$\alpha$ Ursæ Minoris.....	5.8	12.2	-0.1	327	34	8.9	.....	45.2	29.71	48.2	-0 37.2	58.7	.....	+88	27	26.6
	(f) Venus South L. ....	36.6	38.0	+0.1	62	31	37.3	0.0	50.8	29.65	48.4	+1 50.2	.....	57.4	- 6	32	30.1
	$\alpha$ Ursæ Minoris S.P.	2.5	8.0	0.0	324	29	5.3	.....	.....	.....	.....	-0 41.1	57.0	.....	+88	27	26.8
	$\alpha$ Bootis.....	3.5	8.0	0.0	35	59	5.8	.....	54.0	29.63	51.2	+0 41.4	58.1	.....	+20	1	10.2
	$\beta$ Draconis.....	23.9	28.1	-0.5	3	35	25.5	.....	54.7	29.63	51.2	+0 3.5	57.6	.....	+52	25	28.4
	(f) $\gamma$ Draconis.....	4.0	10.5	-0.5	4	30	6.7	+ 0.1	.....	.....	.....	+0 4.6	56.7	.....	+51	30	46.0
	$\alpha$ Ursæ Minoris S.P.	4.8	9.2	0.0	324	29	7.0	.....	48.0	30.14	49.8	-0 42.1	56.2	56.5	+88	27	28.4
	$\zeta$ Ursæ Majoris.....	10.0	15.4	-0.5	0	15	12.2	.....	.....	.....	.....	+0 0.2	57.2	.....	+55	45	44.1
	(f) $\eta$ Ursæ Majoris.....	57.4	61.5	-0.5	5	53	59.0	0.0	.....	.....	.....	+0 6.0	56.3	.....	+50	6	51.5
Oct. 25	Sun South L. ....	9.7	13.8	+0.1	68	13	12.0	.....	48.9	30.15	49.9	+2 25.8	.....	.....	-12	14	41.3
	(i) $\epsilon$ Ursæ Minoris.....	54.7	59.9	-0.2	333	43	57.2	+ 0.1	47.8	30.16	49.6	-0 29.2	56.2	.....	+82	17	28.4
Oct. 26	(k) $\gamma$ Cephei.....	44.5	48.5	-0.4	339	16	46.0	0.0	45.2	30.15	47.5	-0 22.5	56.8	57.3	+76	44	33.8
	(l) $\alpha$ Cassiopeæ.....	13.1	18.1	-0.5	0	21	15.0	- 0.1	.....	.....	.....	+0 0.3	57.4	.....	+55	39	42.1
	(m) $\alpha$ Ursæ Minoris.....	54.5	60.0	-0.1	327	33	57.2	+ 8.3	.....	.....	.....	-0 37.8	57.7	.....	+88	27	29.6
	.....	3.9	9.8	-0.1	327	34	6.8	.....	44.4	30.15	47.5	-0 37.8	.....	.....	+88	27	28.3
Oct. 27	$\alpha$ Ursæ Minoris S.P.	6.7	12.0	0.0	324	29	9.4	.....	44.8	30.30	47.3	-0 42.6	57.0	57.3	+88	27	29.5
	(n) $\zeta$ Ursæ Majoris.....	11.5	16.7	-0.5	0	15	13.6	+ 0.3	.....	.....	.....	+0 0.2	57.8	.....	+55	45	43.2
	$\eta$ Ursæ Majoris.....	0.5	5.1	-0.5	5	54	1.9	.....	.....	.....	.....	+0 6.1	58.2	.....	+50	6	49.3

(a) At 18<sup>h</sup> 26<sup>m</sup> 40<sup>s</sup>.  
 (b) 48<sup>s</sup> after transit.  
 (c) 54<sup>s</sup> after transit.  
 (d) 30<sup>s</sup> before transit.

(e) At Wire V.: Correc-  
 tion for defect of illu-  
 mination 0<sup>s</sup>.3.  
 (f) At Wire IV.

(g) At 18<sup>h</sup> 25<sup>m</sup> 45<sup>s</sup>.  
 (h) At Wire II.  
 (i) At 17<sup>h</sup> 3<sup>m</sup> 50<sup>s</sup>.  
 (k) At 23<sup>h</sup> 33<sup>m</sup> 50<sup>s</sup>.

(l) 15<sup>s</sup> after transit.  
 (m) At 0<sup>h</sup> 50<sup>m</sup> 40<sup>s</sup>.  
 (n) 48<sup>s</sup> after transit.

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.		observed.	adopted.									
Oct. 28	(a) Sun North L. ....	26.2	30.0	+0.1	68	42	28.1	- 1.0	46.0	30.30	47.3	+ 2 31.1	.....	.....	- 12 44 0.9
	(b) $\epsilon$ Bootis .....	12.7	18.6	-0.1	28	15	15.5	+ 0.1	.....	.....	.....	+ 0 31.9	57.3	.....	+ 27 45 9.8
	(c) Mercury Centre.....	15.2	18.5	+0.1	71	58	17.0	- 3.8	.....	.....	.....	+ 3 0.3	.....	.....	- 16 0 16.2
	$\delta$ Ursæ Minoris.....	52.2	56.8	-0.1	329	25	54.3	.....	.....	.....	.....	- 0 35.4	56.3	.....	+ 86 35 38.4
	(d) 51 (Hev.) Cephei S.P.	18.5	23.4	+0.1	323	17	20.9	- 0.8	43.8	30.30	47.0	- 0 44.7	57.2	.....	+ 87 15 38.1
	(e) $\alpha$ Ursæ Minoris S. P.	9.8	14.5	0.0	324	29	12.2	- 3.4	46.0	30.31	47.0	- 0 42.6	56.5	58.3	+ 88 27 27.4
	.....	6.8	12.8	0.0	324	29	9.8	.....	.....	.....	.....	- 0 42.6	.....	.....	+ 88 27 28.9
	$\eta$ Ursæ Majoris.....	0.5	5.0	-0.5	5	54	2.3	.....	.....	.....	.....	+ 0 6.1	58.3	.....	+ 50 6 49.9
$\eta$ Bootis .....	0.0	4.3	0.0	36	48	2.3	.....	.....	.....	.....	+ 0 44.5	59.9	.....	+ 19 12 11.5	
Oct. 29	$\epsilon$ Bootis .....	14.1	19.1	-0.1	28	15	16.5	.....	45.0	30.30	46.7	+ 0 32.0	58.0	.....	+ 27 45 9.8
	$\alpha$ Piscis Australis.....	24.0	25.0	+0.2	86	16	24.6	.....	42.2	30.27	45.5	+ 12 38.5	.....	.....	- 30 28 4.8
	Uranus .....	32.7	34.3	+0.1	63	30	33.6	.....	.....	.....	.....	+ 1 59.4	.....	.....	- 7 31 34.7
	$\alpha$ Ursæ Minoris.....	4.2	9.0	-0.1	327	34	6.5	.....	41.5	30.26	45.4	- 0 38.2	58.6	.....	+ 88 27 30.0
	(f) Moon South L. ....	34.7	....	0.0	39	6	37.3	+ 3.0	.....	.....	.....	+ 0 48.5	.....	57.6	+ 16 53 28.8
	(g) .....	42.0	47.4	0.0	39	6	44.6	- 4.6	42.4	30.22	45.5	+ 0 48.5	.....	.....	+ 16 53 29.1
	$\eta$ Ursæ Majoris.....	1.0	4.9	-0.5	5	54	2.5	.....	45.9	30.19	46.3	+ 0 6.1	58.1	.....	+ 50 6 49.0
	(h) $\alpha$ Bootis .....	4.9	8.5	0.0	35	59	6.7	- 0.1	.....	.....	.....	+ 0 42.9	58.4	.....	+ 20 1 8.1
Oct. 30	Sun South L. ....	34.2	35.0	+0.1	69	54	34.7	.....	46.4	30.19	46.8	+ 2 40.2	.....	.....	- 13 56 17.3
	(i) $\beta$ Ursæ Minoris.....	43.0	48.0	-0.4	341	12	45.1	+ 0.2	46.7	.....	.....	- 0 20.2	56.7	.....	+ 74 48 32.5
	$\delta$ Ursæ Minoris.....	52.9	58.1	-0.1	329	25	55.4	.....	45.4	30.13	46.6	- 0 35.1	57.4	.....	+ 86 35 37.3
Oct. 31	(h) $\beta$ Ursæ Minoris.....	43.5	48.1	-0.4	341	12	45.4	+ 0.6	46.2	29.93	46.7	- 0 20.1	57.1	57.7	+ 74 48 31.8
	(h) $\alpha$ Lyrae.....	13.0	16.9	-0.3	17	22	14.7	0.0	45.2	29.91	46.4	+ 0 18.3	58.0	.....	+ 38 38 24.7
	(l) $\beta$ Lyrae.....	32.9	37.4	-0.2	22	49	34.9	+ 0.4	.....	.....	.....	+ 0 24.7	58.0	.....	+ 33 10 57.7
Nov. 5	$\beta$ Pegasi.....	17.2	22.5	-0.1	28	47	19.8	.....	.....	.....	.....	+ 0 31.9	59.9	58.1	+ 27 13 6.4
	(a) Uranus.....	0.2	1.5	+0.1	63	33	0.9	- 0.4	43.0	29.44	45.0	+ 1 56.2	.....	.....	- 7 33 58.6
	$\alpha$ Piscium .....	4.0	8.4	+0.1	51	14	6.3	.....	.....	.....	.....	+ 1 12.3	57.9	.....	+ 4 45 39.5
	$\gamma$ Pegasi.....	17.8	23.0	0.0	41	42	20.4	.....	42.5	29.46	44.9	+ 0 51.8	57.5	.....	+ 14 17 45.9
	$\alpha$ Ursæ Minoris .....	58.7	64.1	-0.1	327	34	1.3	.....	42.8	29.46	44.7	- 0 37.1	57.2	.....	+ 88 27 33.9
Nov. 7	$\alpha$ Lyrae.....	13.7	17.9	-0.3	17	22	15.5	.....	45.6	29.42	46.5	+ 0 18.0	57.4	57.4	.....
Nov. 8	$\beta$ Ursæ Minoris.....	45.0	50.3	-0.4	341	12	47.2	.....	.....	.....	.....	- 0 19.4	55.6	57.4	+ 74 48 29.6
Nov. 9	(a) Sun North L.....	3.5	9.8	+0.1	72	28	6.7	- 1.0	48.5	29.08	48.0	+ 2 57.3	.....	.....	- 16 30 5.6
	$\alpha$ Andromedæ .....	49.5	55.7	-0.1	27	47	52.5	.....	49.4	29.02	48.5	+ 0 29.8	58.2	.....	+ 28 12 35.1
	$\alpha$ Cassiopeæ.....	10.0	15.3	-0.5	0	21	12.2	.....	.....	.....	.....	+ 0 0.3	58.2	.....	+ 55 39 44.9
	$\alpha$ Ursæ Minoris .....	56.7	62.2	-0.1	327	33	59.3	.....	49.0	28.99	48.7	- 0 36.0	57.7	.....	+ 88 27 34.1
Nov. 10	$\beta$ Ursæ Minoris.....	45.5	51.0	-0.4	341	12	47.8	.....	48.0	28.77	48.5	- 0 19.2	55.7	57.1	+ 74 48 28.5
Nov. 11	Sun South L.....	16.1	20.9	+0.1	73	34	18.5	.....	48.4	.....	.....	+ 3 7.5	.....	.....	- 17 36 28.9
	$\gamma$ Aquilæ .....	16.0	21.2	+0.1	45	46	18.7	.....	.....	.....	.....	+ 0 57.8	58.1	.....	+ 10 13 40.6
	$\alpha$ Aquilæ .....	52.8	56.1	+0.1	47	32	54.5	.....	47.6	28.81	48.5	+ 1 1.4	57.5	.....	+ 8 27 1.2
	(m) $\beta$ Ursæ Minoris.....	47.1	51.3	-0.4	341	12	48.8	+ 0.5	45.8	29.05	47.2	- 0 19.5	56.5	57.3	+ 74 48 27.5
Nov. 12	Sun North L. ....	32.4	34.9	+0.1	73	18	33.7	.....	46.8	.....	.....	+ 3 7.0	.....	.....	- 17 20 43.4
	$\alpha$ Coronæ borealis.....	59.6	65.3	-0.1	28	45	2.4	.....	.....	.....	.....	+ 0 31.2	57.8	.....	+ 27 15 23.7
	$\alpha$ Serpentis.....	50.7	54.7	+0.1	49	3	52.8	.....	46.9	.....	.....	+ 1 5.4	57.6	.....	+ 6 55 59.1
Nov. 13	$\alpha$ Lyrae.....	14.3	19.0	-0.3	17	22	16.4	.....	46.2	29.52	47.6	+ 0 18.1	57.3	57.4	+ 38 38 22.9
	(h) $\beta$ Lyrae.....	35.5	40.0	-0.2	22	49	37.5	- 0.1	.....	.....	.....	+ 0 24.3	57.9	.....	+ 33 10 55.7
	$\alpha$ Cephei.....	14.8	19.0	-0.6	354	6	16.3	.....	46.4	29.54	47.5	- 0 6.1	57.1	.....	+ 61 54 47.2
(a) At Wire V. (d) At 18 <sup>h</sup> 27 <sup>m</sup> 15 <sup>s</sup> . (g) At 9 <sup>h</sup> 24 <sup>m</sup> 46 <sup>s</sup> . (k) At 14 <sup>h</sup> 50 <sup>m</sup> 50 <sup>s</sup> .															
(b) 10 <sup>s</sup> before transit. (e) At 12 <sup>h</sup> 55 <sup>m</sup> 15 <sup>s</sup> . (h) At Wire IV. (l) 1 <sup>m</sup> after transit.															
(c) At 14 <sup>h</sup> 40 <sup>m</sup> 25 <sup>s</sup> . (f) At 9 <sup>h</sup> 24 <sup>m</sup> 9 <sup>s</sup> . (i) At 14 <sup>h</sup> 52 <sup>m</sup> 30 <sup>s</sup> . (m) At 14 <sup>h</sup> 52 <sup>m</sup> 55 <sup>s</sup> .															



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.			Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.										observed.	adopted.	
Nov. 16	$\eta$ Draconis.....	23.5	28.2	-0.6	354	8	25.2	.....	53.0	29.25	52.6	-0 5.9	57.3	57.0	+61 52 37.7
	$\lambda$ Ursæ Minoris.....	34.5	39.7	0.0	327	11	37.1	.....	50.8	29.29	51.0	-0 36.8	55.9	.....	+88 49 56.7
	$\iota$ Piscium.....	4.9	9.8	+0.1	51	14	7.4	.....	49.0	29.32	49.8	+1 11.0	57.4	.....	+ 4 45 38.6
	Moon South L.....	14.4	18.9	+0.1	58	17	16.8	.....	.....	.....	.....	+1 32.1	.....	.....	- 2 17 51.9
	$\omega$ Piscium.....	1.8	8.0	+0.1	50	1	5.0	.....	.....	.....	.....	+1 8.0	.....	.....	+ 5 58 44.0
	$\alpha$ Andromedæ.....	49.0	53.8	-0.1	27	47	51.3	.....	.....	.....	.....	+0 30.1	57.8	.....	+28 12 35.6
	41 Piscium.....	39.4	43.9	+0.1	48	41	41.8	.....	49.0	29.33	49.8	+1 4.9	.....	.....	+ 7 18 10.3
	$\alpha$ Ursæ Minoris.....	53.4	59.4	-0.1	327	33	56.3	.....	.....	.....	.....	-0 36.5	56.5	.....	+88 27 37.2
	(a) Juno.....	43.8	46.8	+0.1	64	39	45.4	- 0.5	49.0	29.35	49.7	+2 0.0	.....	.....	- 8 40 47.9
Nov. 17	$\omega$ Piscium.....	1.6	7.9	+0.1	50	1	4.9	.....	45.0	29.63	48.4	+1 9.3	.....	57.2	+ 5 58 43.0
	$\alpha$ Andromedæ.....	48.0	53.0	-0.1	27	47	50.4	.....	.....	.....	.....	+0 30.7	57.6	.....	+28 12 36.1
	$\gamma$ Pegasi.....	17.4	22.4	0.0	41	42	19.9	.....	.....	.....	.....	+0 51.9	57.3	.....	+14 17 45.4
	(a) 41 Piscium.....	39.2	43.1	+0.1	48	41	41.3	- 0.2	.....	.....	.....	+1 6.2	.....	.....	+ 7 18 9.9
	Moon South L.....	32.0	35.5	+0.1	51	12	33.8	.....	.....	.....	.....	+1 12.4	.....	.....	+ 4 47 11.0
	$\beta$ Ceti.....	21.6	25.2	+0.1	74	49	23.5	.....	.....	.....	.....	+3 31.2	.....	.....	-18 51 57.5
	$\epsilon$ Piscium.....	3.0	8.2	+0.1	48	58	5.7	.....	.....	.....	.....	+1 6.9	.....	.....	+ 7 1 44.6
	$\alpha$ Ursæ Minoris.....	53.8	59.0	-0.1	327	33	56.3	.....	.....	.....	.....	-0 37.2	56.2	.....	+88 27 38.1
	Juno.....	50.5	53.3	+0.1	64	41	52.0	.....	.....	.....	.....	+2 2.6	.....	.....	- 8 42 57.4
	$\theta^1$ Ceti.....	24.6	28.2	+0.1	64	59	26.5	.....	44.0	29.62	47.9	+2 4.3	57.8	.....	- 9 0 33.6
Nov. 18	(a) $\gamma$ Pegasi.....	18.0	23.2	0.0	41	42	20.6	- 0.1	47.6	29.53	48.0	+0 51.4	57.4	57.4	.....
Nov. 19	$\gamma$ Pegasi.....	17.9	23.2	0.0	41	42	20.6	.....	44.1	29.36	46.3	+0 51.5	57.6	58.1	+14 17 46.0
	$\alpha$ Cassiopeæ.....	8.8	13.4	-0.5	0	21	10.6	.....	.....	.....	.....	+0 0.3	58.7	.....	+55 39 47.2
	$\beta$ Ceti.....	22.8	25.8	+0.1	74	49	24.4	.....	.....	.....	.....	+3 29.6	.....	.....	-18 51 55.9
	$\alpha$ Ursæ Minoris.....	55.0	60.0	-0.1	327	33	57.4	.....	.....	.....	.....	-0 36.9	58.2	.....	+88 27 37.6
	Juno.....	3.3	6.8	+0.1	64	45	5.2	.....	44.0	29.38	46.2	+2 2.0	.....	.....	- 8 46 9.1
	$\theta^1$ Ceti.....	25.9	29.8	+0.1	64	59	27.9	.....	.....	.....	.....	+2 3.3	58.0	.....	- 9 0 33.1
	$\beta$ Arietis.....	39.5	43.0	0.0	35	58	41.2	.....	.....	.....	.....	+0 42.0	.....	.....	+20 1 34.9
	$\theta^1$ Arietis.....	34.0	37.3	0.0	36	50	35.7	.....	43.9	29.39	46.0	+0 43.4	.....	.....	+19 9 39.0
	(b) Moon South L.....	55.2	58.9	0.0	37	51	57.1	- 9.2	.....	.....	.....	+0 45.0	.....	.....	+18 8 25.2
	(c) Moon North L.....	36.5	40.1	0.0	37	17	38.3	+11.4	.....	.....	.....	+0 44.1	.....	.....	+18 42 24.3
	$\gamma$ Ceti.....	1.0	4.9	+0.1	53	26	3.1	.....	.....	.....	.....	+1 17.9	.....	.....	+ 2 33 37.1
	$\epsilon$ Arietis.....	17.4	21.9	0.0	35	18	19.6	.....	.....	.....	.....	+0 41.0	.....	.....	+20 41 57.5
	$\delta$ Arietis.....	0.0	4.6	0.0	36	53	2.3	.....	43.8	29.42	45.8	+0 43.5	.....	.....	+19 7 12.3
	$\alpha$ Coronæ borealis.....	1.4	6.9	-0.1	28	45	4.1	.....	45.5	.....	.....	+0 31.9	58.1	57.5	+27 15 21.5
	$\alpha$ Serpentis.....	51.0	55.3	+0.1	49	3	53.2	.....	.....	.....	.....	+1 6.9	58.1	.....	+ 5 55 57.4
Nov. 20	Sun South L.....	8.3	13.0	+0.1	75	51	10.8	.....	45.7	29.60	46.5	+3 45.9	.....	.. ..	-19 53 59.2
	(d) $\zeta$ Ursæ Minoris.....	26.0	29.1	-0.3	337	44	27.2	+ 0.1	.....	.....	.....	-0 23.9	57.5	.....	+78 16 54.1
	(e) Mercury Centre.....	20.2	23.9	+0.1	81	6	22.2	- 1.0	46.8	29.59	47.2	+5 53.1	.....	.....	-25 11 16.8
	$\delta$ Ursæ Minoris.....	55.5	61.2	-0.1	329	25	58.3	.....	44.5	29.56	46.0	-0 34.5	56.8	.....	+86 35 33.7
	$\lambda$ Ursæ Minoris.....	36.1	41.5	0.0	327	11	38.8	.....	43.5	29.53	45.4	-0 37.7	56.5	.....	+88 49 56.4
	$\alpha$ Ursæ Minoris.....	54.4	60.1	-0.1	327	33	57.1	.....	42.2	29.40	44.8	-0 37.1	58.1	.....	+88 27 37.5
Nov. 21	(f) $\alpha$ Ursæ Minoris.....	54.5	59.5	-0.1	327	33	56.9	+ 0.6	42.2	29.60	44.9	-0 37.3	58.6	58.4	+88 27 38.2
	$\gamma$ Ceti.....	59.9	64.4	+0.1	53	26	2.3	.....	43.0	29.62	44.9	+1 18.6	.....	.....	+ 2 33 37.5
	(a) $\alpha$ Ceti.....	1.5	5.7	+0.1	52	32	3.7	- 0.2	.....	.....	.....	+1 16.2	58.1	.....	+ 3 27 38.7
	$\alpha$ Persei.....	30.0	33.5	-0.5	6	43	31.2	.....	.....	.....	.....	+0 6.9	58.2	.....	+49 17 20.3
	$\eta$ Tauri.....	50.2	54.8	-0.1	32	23	52.4	.....	42.0	29.64	44.7	+0 37.2	58.4	.....	+23 36 28.8
	37 Tauri.....	44.6	47.5	0.0	34	21	46.1	.....	.....	.....	.....	+0 40.1	.....	.....	+21 38 32.2
	$\nu^1$ Tauri.....	25.3	29.1	-0.1	33	23	27.1	.....	.....	.....	.....	+0 38.7	.....	.....	+22 36 52.6
	Moon North L.....	18.8	22.7	-0.1	28	55	20.7	.....	41.0	29.65	44.4	+0 32.4	.....	.....	+27 5 5.3
Nov. 22	(e) $\alpha$ Herculis.....	26.0	30.0	0.0	41	25	28.0	- 0.1	43.0	29.84	45.0	+0 51.9	57.1	57.1	+14 34 37.3
	$\alpha$ Ophiuchi.....	9.1	12.5	0.0	43	19	10.8	.....	.....	.....	.....	+0 55.5	58.2	.....	+12 40 50.8
<div style="display: flex; justify-content: space-between; align-items: flex-start; padding: 10px;"> <div style="width: 30%;"> <p>(a) At Wire IV.</p> <p>(b) At 2<sup>h</sup> 26<sup>m</sup> 51<sup>s</sup>.</p> <p>(c) At 2<sup>h</sup> 28<sup>m</sup> 25<sup>s</sup>: not fully</p> </div> <div style="width: 35%; text-align: center;"> <p>enlightened; correction for defect of illumination 0".4.</p> <p>(d) At 15<sup>h</sup> 51<sup>m</sup> 0<sup>s</sup>.</p> </div> <div style="width: 30%;"> <p>(e) At Wire V.</p> <p>(f) At 1<sup>h</sup> 6<sup>m</sup> 40<sup>s</sup>.</p> </div> </div>															

Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Nov. 22	$\gamma$ Draconis .....	13.1	18.0	-0.5	4 30 15.1	.....	.....	.....	.....	+0 4.6	58.0	57.1	+51 30 37.4
	$\delta$ Ursæ Minoris .....	56.3	62.0	-0.1	329 25 59.1	.....	43.2	29.87	45.0	-0 34.9	56.8	.....	+86 35 32.9
	$\lambda$ Ursæ Minoris .....	36.0	40.8	0.0	327 11 38.4	.....	43.0	29.88	44.9	-0 38.2	55.4	.....	+88 49 56.9
	$\alpha$ Ursæ Minoris .....	53.1	59.2	-0.1	327 33 56.0	.....	41.9	29.92	44.0	-0 37.8	56.9	.....	+88 27 38.9
Nov. 23	(a) Sun North L. ....	16.8	20.9	+0.1	75 58 18.9	- 1.0	42.9	29.74	44.2	+3 50.3	.....	57.6	-20 1 10.6
	$\epsilon$ Ursæ Minoris .....	4.8	9.9	-0.2	333 44 7.1	.....	.....	.....	.....	-0 29.0	57.8	.....	+82 17 19.5
	$\alpha$ Herculis .....	26.7	30.9	0.0	41 25 28.8	.....	44.3	29.72	44.9	+0 51.5	57.4	.....	+14 34 37.3
	$\alpha$ Ophiuchi .....	8.9	12.9	0.0	43 19 10.9	.....	.....	.....	.....	+0 55.1	57.7	.....	+12 40 51.6
Nov. 26	$\alpha$ Lyræ .....	19.1	22.3	-0.3	17 22 20.4	.....	34.9	28.98	40.5	+0 18.2	58.6	57.9	+38 38 19.3
	$\lambda$ Ursæ Minoris .....	37.4	41.3	0.0	327 11 39.4	.....	34.7	29.00	39.9	-0 37.7	56.7	.....	+88 49 56.2
	$\alpha$ Cygni .....	55.1	59.0	-0.4	11 17 56.6	.....	.....	.....	.....	+0 11.6	58.3	.....	+44 42 49.7
Nov. 27	Sun South L. ....	55.7	60.0	+0.1	77 17 57.9	.....	31.4	29.07	34.0	+4 15.0	.....	57.7	-21 21 15.2
	$\eta$ Draconis .....	28.2	31.8	-0.6	354 8 29.4	.....	.....	.....	.....	-0 6.1	57.4	.....	+61 52 34.4
	$\gamma$ Draconis .....	14.9	19.0	-0.5	4 30 16.5	.....	.....	.....	.....	+0 4.6	57.9	.....	+51 30 36.6
	$\alpha$ Lyræ .....	18.7	21.0	-0.3	17 22 19.6	.....	33.0	29.07	35.0	+0 18.3	57.7	.....	+38 38 19.8
Nov. 28	$\alpha^2$ Capricorni .....	41.0	42.8	+0.1	69 0 42.0	.....	32.8	29.24	38.0	+2 32.5	59.2	58.4	-13 2 16.1
	$\alpha$ Cygni .....	56.0	59.3	-0.4	11 17 57.2	.....	.....	.....	.....	+0 11.8	58.8	.....	+44 42 49.4
	(b) $\lambda$ Ursæ Minoris .....	27.0	30.0	0.0	327 11 28.5	+12.6	.....	.....	.....	-0 38.2	57.7	.....	+88 49 55.5
	$\zeta$ Cygni .....	55.0	57.9	-0.2	26 25 56.3	.....	32.3	29.27	37.6	+0 29.4	57.7	.....	+29 34 32.7
Nov. 30	(c) $\lambda$ Ursæ Minoris .....	57.3	62.0	0.0	327 10 59.7	+40.1	41.0	29.15	41.8	-0 37.4	56.9	57.4	+88 49 55.0
	(d) $\alpha$ Arietis .....	55.7	59.5	-0.1	33 17 57.5	+ 0.3	41.0	29.30	42.0	+0 38.1	57.2	.....	+22 42 21.5
	(e) $\alpha$ Persei .....	28.4	31.5	-0.5	6 43 29.4	0.0	40.1	.....	.....	+0 6.8	58.1	.....	+49 17 21.2
	(f) $\eta$ Tauri .....	49.7	53.5	-0.1	32 23 51.5	+ 0.2	40.0	29.30	41.9	+0 36.9	57.6	.....	+23 36 28.8
Dec. 6	Sun North L. ....	35.5	35.2	+0.1	78 8 35.4	.....	34.6	29.95	38.6	+4 39.1	.....	58.1	-22 12 16.4
	(a) $\alpha$ Aquilæ .....	53.0	55.9	+0.1	47 32 54.5	- 0.2	37.5	29.94	39.0	+1 5.3	58.6	.....	+ 8 26 58.5
	$\alpha$ Cygni .....	57.0	60.4	-0.4	11 17 58.3	.....	36.9	29.93	39.0	+0 11.9	58.8	.....	+44 42 47.9
	(g) $\lambda$ Ursæ Minoris .....	22.0	26.0	0.0	327 11 24.0	+17.7	.....	.....	.....	-0 38.7	56.7	.....	+88 49 55.1
Dec. 7	$\zeta$ Cygni .....	56.8	59.0	-0.2	26 25 57.7	.....	37.0	29.93	39.0	+0 29.7	58.4	.....	+29 34 30.7
	Sun South L. ....	56.8	60.8	+0.1	78 47 58.9	.....	37.4	29.85	39.0	+4 52.1	.....	59.1	-22 51 51.9
Dec. 12	(e) $\gamma$ Draconis .....	19.0	23.2	-0.5	4 30 20.6	+ 0.1	.....	.....	.....	+0 4.7	59.1	.....	.....
	(h) $\delta$ Ursæ Minoris .....	59.4	64.8	-0.1	329 26 2.0	+ 1.9	42.4	28.95	41.8	-0 33.9	57.0	57.0	.....
Dec. 16	(e) $\alpha$ Cygni .....	57.4	61.0	-0.4	11 17 58.8	0.0	40.0	29.57	41.8	+0 11.7	57.3	57.1	+44 42 46.6
	(e) $\zeta$ Cygni .....	57.0	60.7	-0.2	26 25 58.7	- 0.1	.....	.....	.....	+0 29.2	57.3	.....	+29 34 29.3
	$\alpha$ Cephei .....	17.5	21.2	-0.6	354 6 18.8	.....	39.4	29.58	41.8	-0 6.2	56.8	.....	+61 54 44.5
Dec. 17	$\alpha$ Aquarii .....	6.4	10.5	+0.1	57 5 8.6	.....	37.0	29.56	39.8	+1 31.0	57.3	57.8	- 1 5 41.8
	$\zeta$ Pegasi .....	0.7	4.2	+0.1	46 0 2.6	.....	37.0	29.54	39.8	+1 1.1	58.4	.....	+ 9 59 54.1
Dec. 20	(i) $\delta$ Ursæ Minoris S. P. ....	9.4	14.7	+0.1	322 37 12.2	- 7.2	.....	.....	.....	-0 42.9	57.7	57.7	+86 35 24.4
	(k) 51 (Hev.) Cephei .....	35.2	40.8	-0.1	328 45 37.9	+ 3.4	.....	.....	.....	-0 34.1	57.7	.....	+87 15 50.5
	(l) Moon North L. ....	58.8	65.0	-0.1	28 21 1.8	+ 3.3	48.1	28.66	46.5	+0 30.2	.....	.....	+27 39 22.4
Dec. 21	Sun North L. ....	32.9	37.4	+0.1	79 7 35.2	.....	47.5	28.83	47.2	+4 43.9	.....	57.4	-23 11 21.7
	(m) $\delta$ Ursæ Minoris .....	3.0	9.4	-0.1	329 26 6.1	+ 0.2	.....	.....	.....	-0 33.4	57.1	.....	+86 35 24.5
	$\alpha$ Lyræ .....	25.0	28.8	-0.3	17 22 26.6	.....	.....	.....	.....	+0 17.6	57.3	.....	+38 38 13.2
	(n) $\beta$ Lyræ .....	43.9	48.9	-0.2	22 49 46.2	0.0	47.8	.....	.....	+0 23.7	57.3	.....	+33 10 47.5
	(n) $\zeta$ Aquilæ .....	19.0	24.0	0.0	42 22 21.5	- 0.2	.....	.....	.....	+0 51.3	57.6	.....	+13 37 44.8
<div> <div>(a) At Wire V.</div> <div>(b) At 20<sup>h</sup> 39<sup>m</sup> 20<sup>s</sup>.</div> <div>(c) At 20<sup>h</sup> 53<sup>m</sup> 15<sup>s</sup>.</div> <div>(d) At 2<sup>h</sup> 0<sup>m</sup> 0<sup>s</sup>.</div> </div> <div> <div>(e) At Wire IV.</div> <div>(f) At 3<sup>h</sup> 39<sup>m</sup> 40<sup>s</sup>.</div> <div>(g) At 20<sup>h</sup> 42<sup>m</sup> 35<sup>s</sup>.</div> </div> <div> <div>(h) At 18<sup>h</sup> 20<sup>m</sup> 30<sup>s</sup>.</div> <div>(i) At 6<sup>h</sup> 16<sup>m</sup> 35<sup>s</sup>.</div> <div>(k) At 6<sup>h</sup> 18<sup>m</sup> 52<sup>s</sup>.</div> </div> <div> <div>(l) At 6<sup>h</sup> 24<sup>m</sup> 37<sup>s</sup>.</div> <div>(m) At 18<sup>h</sup> 22<sup>m</sup> 55<sup>s</sup>.</div> <div>(n) 30<sup>s</sup> after transit.</div> </div>													



Date.	OBJECT OBSERVED.	Microscope.		Correc- tion.	Mean Reading of Circle.	Reduc- tion to Meri- dian.	Ext. Ther.	Bar.	Att. Ther.	Refraction.	Equatorial Point		Apparent Declination observed.
		I.	II.								observed.	adopted.	
Dec. 21	(a) $\tau$ Geminorum.....	21.1	25.0	-0.2	25 30 22.9	+ 0.1	46.8	28.96	47.0	+0 27.0	.....	57.4	+30 30 7.4
	(b) Moon South L.....	29.6	32.6	-0.1	31 13 31.0	+ 7.7	.....	.....	.....	+0 34.4	.....	.....	+24 46 44.3
	(c) Moon North L.....	37.7	41.1	-0.1	30 40 39.3	- 5.7	46.8	28.97	47.0	+0 33.6	.....	.....	+25 19 50.2
Dec. 22	$\beta$ Draconis.....	41.3	46.4	-0.5	3 35 43.4	.....	44.5	28.86	45.3	+0 3.5	56.9	57.0	+52 25 10.1
	$\gamma$ Draconis.....	23.9	27.9	-0.5	4 30 25.4	.....	.....	.....	.....	+0 4.4	58.0	.....	+51 30 27.2
Dec. 23	Sun South L.....	51.5	54.0	+0.1	79 39 52.8	.....	44.7	28.88	45.5	+5 0.5	.....	.....	-23 43 56.3
	$\delta$ Ursæ Minoris.....	2.9	9.0	-0.1	329 26 5.9	.....	.....	.....	.....	-0 33.7	55.7	.....	+86 35 24.8
	(d) $\alpha$ Lyræ.....	25.9	29.5	-0.3	17 22 27.4	0.0	.....	.....	.....	+0 17.7	57.6	.....	+38 38 11.9
Dec. 24	$\alpha$ Cephei.....	17.8	23.4	-0.6	354 6 20.0	.....	43.5	28.40	44.7	-0 5.8	56.9	57.8	+61 54 43.6
	$\downarrow$ Arietis.....	25.9	30.0	0.0	39 0 28.0	.....	41.8	28.52	43.8	+0 45.7	.....	.....	+16 59 44.1
	A. S. C. 268.....	30.4	35.6	+0.1	49 52 32.8	.....	.....	.....	.....	+1 6.9	.....	.....	+ 6 7 18.1
	$\gamma$ Ceti.....	4.9	9.5	+0.1	53 26 7.3	.....	.....	.....	.....	+1 16.0	.....	.....	+ 2 33 34.5
	$\alpha$ Ceti.....	6.1	10.3	+0.1	52 32 8.3	.....	.....	.....	.....	+1 13.6	58.8	.....	+ 3 27 35.9
	$\alpha$ Persei.....	24.0	27.3	-0.5	6 43 25.1	.....	40.8	28.53	42.5	+0 6.6	57.6	.....	+49 17 26.1
	$\gamma$ Draconis.....	23.7	27.5	-0.5	4 30 25.1	.....	42.0	.....	.....	+0 4.4	57.0	56.6	+51 30 27.1
Dec. 25	Sun North L.....	33.7	36.9	+0.1	79 5 35.4	.....	41.6	28.74	42.9	+4 45.9	.....	.....	-23 9 24.7
	$\delta$ Ursæ Minoris.....	4.1	9.9	-0.1	329 26 6.9	.....	.....	.....	.....	-0 33.8	56.0	.....	+86 35 23.5
	$\alpha$ Lyræ.....	25.9	29.0	-0.3	17 22 27.2	.....	.....	.....	.....	+0 17.8	56.9	.....	+38 38 11.6
	$\alpha$ Aquilæ.....	56.0	59.0	+0.1	47 32 57.6	.....	40.2	28.78	43.0	+1 2.4	56.3	.....	+ 8 26 56.6
Dec. 26	Sun South L.....	3.6	7.5	+0.1	79 36 5.7	.....	34.5	29.22	38.5	+5 9.1	.....	57.2	-23 40 17.6
	$\alpha$ Lyræ.....	25.8	29.0	-0.3	17 22 27.1	.....	.....	.....	.....	+0 18.4	57.1	.....	+38 38 11.7
	$\alpha$ Cygni.....	59.0	63.9	-0.4	11 18 1.0	.....	35.0	29.18	37.7	+0 11.7	57.2	.....	+44 42 44.5
	$\zeta$ Pegasi.....	0.8	4.0	+0.1	46 0 2.5	.....	33.0	29.14	37.7	+1 0.8	57.2	.....	+ 9 59 53.9
Dec. 27	$\beta$ Pegasi.....	17.0	22.0	-0.1	28 47 19.4	.....	.....	.....	.....	+0 32.3	58.5	58.5	.....
	Uranus.....	44.0	44.3	+0.1	63 21 44.3	.....	32.2	29.10	34.4	+1 56.7	.....	.....	- 7 22 42.5
	21 Virginis.....	59.5	63.0	+0.1	64 33 1.3	.....	32.0	29.17	35.2	+2 3.2	.....	58.6	- 8 34 5.9
	(e) Moon South L.....	41.4	44.8	+0.1	64 28 43.2	-14.1	.....	.....	.....	+2 2.9	.....	.....	- 8 29 33.4
	12 Canum Venat. ....	54.5	56.5	-0.3	16 49 55.2	.....	.....	.....	.....	+0 17.8	57.5	.....	+39 10 45.6
Dec. 28	Sun North L.....	2.0	4.0	+0.1	78 59 3.1	.....	32.0	29.30	34.0	+4 54.9	.....	.....	-23 2 59.4
	$\alpha$ Lyræ.....	29.0	30.2	-0.3	17 22 29.3	.....	.....	.....	.....	+0 18.5	58.8	.....	+38 38 10.8
	(d) $\beta$ Lyræ.....	47.8	50.7	-0.2	22 49 49.0	- 0.1	.....	.....	.....	+0 24.9	59.2	.....	+33 10 44.8
	$\alpha$ Aquilæ.....	56.7	60.2	+0.1	47 32 58.5	.....	33.4	29.32	34.9	+1 4.6	58.9	.....	+ 8 26 55.5
	(a) Uranus.....	4.6	5.0	+0.1	63 21 4.9	- 0.4	33.0	29.38	35.0	+1 57.5	.....	.....	- 7 22 3.4
	12 Canum Venat. ....	55.1	57.4	-0.3	16 49 55.9	.....	31.0	29.73	34.2	+0 18.2	58.4	58.8	+39 10 44.7
	$\alpha$ Ursæ Minoris S. P.	25.8	29.0	-0.1	324 29 27.3	.....	.....	.....	.....	-0 43.2	57.4	.....	+88 27 45.3
	(f) Moon South L.....	9.4	12.0	+0.1	69 58 10.8	+10.6	.....	.....	.....	+2 43.6	.....	.....	-14 0 6.2
	(g) ..... $\eta$ Ursæ Majoris.....	30.1	31.2	+0.1	69 58 30.7	- 9.3	.....	.....	.....	+2 43.6	.....	.....	-14 0 6.2
	$\eta$ Bootis.....	21.5	24.3	-0.5	5 54 22.4	.....	.....	.....	.....	+0 6.2	58.6	.....	+50 6 30.2
	$\eta$ Bootis.....	17.0	19.7	0.0	36 48 18.3	.....	31.8	29.76	33.5	+0 45.0	60.7	.....	+19 11 55.5
Dec. 29	$\alpha$ Ursæ Minoris S. P.	26.0	29.9	-0.1	324 29 27.8	.....	31.1	29.96	35.6	-0 43.5	57.5	58.8	+88 27 45.5
	$\zeta$ Ursæ Majoris.....	32.2	35.0	-0.5	0 15 33.1	.....	.....	.....	.....	+0 0.2	57.0	.....	+55 45 25.5
	$\eta$ Ursæ Majoris.....	22.0	25.0	-0.5	5 54 23.0	.....	.....	.....	.....	+0 6.2	59.0	.....	+50 6 29.6
	$\eta$ Bootis.....	18.3	20.0	0.0	36 48 19.1	.....	.....	.....	.....	+0 45.4	61.6	.....	+19 11 54.3
Dec. 31	(h) $\beta$ Pegasi.....	18.8	22.1	-0.1	28 47 20.4	0.0	.....	.....	.....	+0 31.5	58.2	58.5	+27 13 6.6
	Uranus.....	49.9	50.8	+0.1	63 18 50.4	.....	41.8	28.99	41.9	+1 53.5	.....	.....	- 7 19 45.4
	$\alpha$ Ceti.....	6.9	11.0	+0.1	52 32 9.1	.....	41.5	28.96	42.0	+1 14.7	59.3	.....	+ 3 27 34.7
	$\eta$ Tauri.....	49.7	53.7	-0.1	32 23 51.6	.....	41.2	28.96	42.0	+0 36.4	57.9	.....	+23 36 30.5

(a) At Wire V.  
(b) At 7<sup>h</sup> 32<sup>m</sup> 30<sup>s</sup>.  
(c) At 7<sup>h</sup> 34<sup>m</sup> 6<sup>s</sup>.: not fully

enlightened; correction  
for defect of illumination  
0".1.

(d) At Wire IV.  
(e) At 12<sup>h</sup> 42<sup>m</sup> 15<sup>s</sup>.  
(f) At 13<sup>h</sup> 25<sup>m</sup> 18<sup>s</sup>.

(g) At 13<sup>h</sup> 26<sup>m</sup> 48<sup>s</sup>.  
(h) 12<sup>s</sup> after transit.





ELEMENTS  
FOR  
REDUCING THE OBSERVATIONS  
MADE WITH  
THE MURAL CIRCLE;  
AND  
MEAN DECLINATIONS OF THE STARS OBSERVED,  
FOR JANUARY 1, 1839.

## MEAN VALUE OF THE RUNS OF THE MICROSCOPES.

PERIOD.		Mean Value of Runs.
Beginning	Ending	
1839, January 1	1839, February 26	" 300.28
February 27	March 6	300.26
March 12	25	299.86
26	July 21	300.16
July 24	October 29	300.28
October 30	December 31	299.96

## CORRECTION OF THE CIRCLE-CLOCK.

Date.	Time by Circle-Clock.	Correction.	Date.	Time by Circle-Clock.	Correction.	Date.	Time by Circle-Clock.	Correction.
1839, Jan. 1	h. m. 19 22	s. - 11.6	1839, Feb. 22	h. m. 22 58	s. - 61.9	1839, April 9	h. m. 2 52	s. - 40.6
2	19 7	12.3		22 59 (a)	1.9	10	2 5	45.4
3	20 39	13.7	23	22 50	3.6	11	1 54	50.4
4	21 32	14.6	25	23 47	7.0	12	1 44	55.1
7	20 58	20.3	26	23 43	8.9	13	1 38	- 58.6
9	19 31	26.3	27	10 52	11.5		1 39 (a)	+ 1.4
10	19 36	30.4	28	23 10	12.8		9 3	- 0.5
11	20 28	32.7				15	7 30	7.5
14	20 26	36.4	March 1	22 58	14.2	17	10 52	16.0
15	21 0	38.8	4	23 45	16.8	18	2 1	19.0
17	20 28	45.1	5	2 47	18.2		5 50	19.9
18	21 17	49.6	8	1 25	25.5	19	2 11	24.0
20	0 31	57.2	11	23 47	37.0	20	2 39	29.1
21	20 56	59.6	12	0 23	40.8	21	2 57	34.1
22	21 18	62.7	13	3 24	45.2		9 26	35.1
23	21 54	66.4	15	0 36	51.1	23	2 30	42.4
	21 55 (a)	6.4	16	0 39	52.7	24	2 47	45.7
24	23 33	9.3	18	0 2	54.3	25	3 4	49.2
26	20 45	13.4	20	0 54	57.9	26	2 51	52.8
28	20 54	18.3	21	1 41	59.2	27	2 48	56.2
29	21 35	21.5	22	2 2	60.7	28	4 8	60.3
				2 3 (a)	0.7	29	3 11	64.1
Feb. 1	21 13	33.6	23	1 29	2.1		3 12 (a)	4.1
2	22 4	37.2	24	8 27	3.8	30	3 27	7.4
4	23 44	41.9	25	0 43	4.8			
5	22 19	43.4	26	1 26	5.9	May 1	6 17	9.7
6	21 39	44.9	28	1 44	7.3	2	2 47	12.7
7	21 52	45.7	29	1 17	7.9	3	2 59	16.7
8	22 37	46.8	30	1 46	9.6	4	3 22	20.7
9	21 58	46.7		9 26	10.1	6	3 28	27.7
11	22 34	47.0				9	4 5	39.1
12	22 44	47.0	April 1	1 21	13.2	10	3 26	43.4
16	1 47	49.5	3	0 56	18.2	11	5 12	48.4
18	22 16	52.0	4	2 25	21.5	13	3 37	58.9
19	22 18	53.8	5	1 17	24.7	14	5 49	66.1
20	23 21	56.4	8	1 22	36.2		5 50 (a)	6.1

(a) Clock put back one minute.



Date.	Time by Circle-Clock.	Correction.	Date.	Time by Circle-Clock.	Correction.	Date.	Time by Circle-Clock.	Correction.
1839, May 15	<i>h. m.</i> 4 40	<i>s.</i> - 12.7	1839, July 16	<i>h. m.</i> 8 10 (a)	<i>s.</i> - 0.6	1839, Oct. 28	<i>h. m.</i> 14 36	<i>s.</i> - 32.0
16	4 21	19.9	17	9 7	8.1	29	15 15	33.1
17	3 59	26.3	18	8 12	14.5	30	15 2	34.0
18	4 44	32.1	19	8 0	20.8	31	15 21	34.4
20	4 6	40.6	20	8 36	27.0			
22	4 13	47.0	22	8 46	37.0	Nov. 1	14 58	35.3
24	8 7	54.8	23	8 48	42.2	2	14 55	36.2
27	9 0	70.1	24	8 30	46.3	4	16 4	35.8
28	16 26	77.1	25	8 31	51.2	5	15 48	35.2
30	8 17	87.1	26	8 32	55.2	6	15 50	35.3
	8 18 (a)	27.1	27	12 0	- 59.8	7	15 1	35.0
31	6 56	34.4		12 1 (a)	+ 0.2	8	15 56	34.7
			29	8 54	- 7.4	9	17 42	34.0
June 1	6 2	41.2	30	8 47	11.5	11	15 42	33.0
3	6 0	55.1	31	9 19	15.4	12	15 50	32.4
4	6 57	62.4				13	15 37	32.2
	6 58 (a)	2.4	Aug. 1	8 58	19.7	14	16 9	32.0
5	5 9	8.6	9	11 28	57.1	15	15 56	31.8
6	5 19	14.3				16	16 3	31.3
7	6 31	20.1	Sept. 13	12 20 (b)	8.9	17	0 9	31.8
8	5 17	25.5	14	12 0	13.0	18	17 7	32.2
10	5 24	36.8	16	12 34	20.2	19	17 29	32.7
11	6 9	43.2	17	13 42	22.7	20	16 43	33.5
12	6 6	48.7	18	12 10	24.6	21	16 41	34.5
13	6 18	54.7	19	12 8	27.0		4 20	35.3
14	6 5	60.8	20	12 20	29.7	22	16 33	35.3
	6 6 (a)	0.8	21	12 24	32.1	23	16 23	35.3
15	6 56	7.1	22	23 23	35.7	25	16 6	34.3
16	9 52	11.8	23	12 18	37.3	26	18 14	33.8
17	6 14	16.7	24	12 29	40.4	27	16 46	33.9
18	6 30	22.7	25	13 18	42.4	28	17 17	35.9
19	6 45	28.7	27	12 47	48.7	29	18 1	37.9
20	6 53	34.9	28	15 59	51.7	30	16 53	39.4
22	7 9	47.4						
24	7 48	59.4	Oct. 1	14 19	59.6	Dec. 2	17 24	40.8
25	6 39	64.1	2	14 45	62.1	4	18 46	42.6
	6 40 (a)	4.1		14 46 (a)	2.1	5	17 2	43.3
26	9 16	9.3	3	13 1	5.0	6	17 37	44.2
27	7 22	13.5	4	12 55	7.9	7	17 38	45.0
28	7 0	18.2	5	12 58	10.9	9	18 48	46.6
29	14 27	24.7	7	13 19	16.7	10	19 2	47.7
			8	13 46	19.7	11	17 41	48.6
July 1	7 13	33.5	9	14 18	21.7	12	17 24	49.6
2	7 3	38.8	10	14 53	23.4	13	17 33	50.1
3	7 24	43.8	11	13 45	24.4	14	18 34	50.3
4	7 35	48.6	12	13 54	24.9	16	18 18	49.1
5	7 51	53.9	14	13 45	24.8	18	18 8	47.9
6	7 58	- 59.9	16	14 48	27.0	20	18 24	46.4
	7 59 (a)	+ 0.1	17	21 33	28.8	21	18 2	45.3
8	7 14	- 11.5	18	13 47	29.8	23	18 43	41.4
9	7 34	17.2	19	13 40	31.1	25	20 25	38.3
10	9 2	23.1	21	14 13	33.0	27	19 0	36.9
11	7 22	28.9	23	14 4	33.1	28	19 21	38.2
13	7 55	40.6	24	15 12	32.3	30	23 13	39.9
15	8 20	53.8	25	15 22	31.6	31	19 59	40.8
16	8 9	60.6	26	15 25	31.3			

(a) Clock put back one minute.

(b) Clock put back three minutes.

MEAN DECLINATIONS OF THE STARS OBSERVED IN THE YEAR 1839, REDUCED TO  
JANUARY 1, 1839.

$\alpha$ Andromedæ.			$\alpha$ Cassiopeæ.			$\alpha$ Ursæ Minoris.			$\alpha$ Ursæ Minoris S.P.			$\eta$ Piscium.		
Jan. 20	+28 12	5.2	Mar. 19	+55 39	12.7	Jan. 21	+88 27	2.8	April 10	+88 27	4.6	Sept. 23	+14 30	48.1
Feb. 1		3.9	25		11.9	28		3.0	13		3.9	$\beta$ Arietis.		
27		4.5	Oct. 20		11.8	Feb. 1		3.2	17		2.4	Nov. 19 +20 1 6.0		
Mar. 4		3.8				6		3.9				$\alpha$ Arietis.		
19		5.3	26		12.1	13		2.8	18		2.1	Feb. 13 +22 41 52.3		
Sept. 22		5.1	Nov. 9		11.4	23		4.0	20		2.8	18		52.5
24		4.8	19		11.6	25		3.0	23		3.5	23		53.7
Oct. 12		4.8	$\beta$ Ceti.			27		2.6	24		3.4	25		53.0
20		4.3	Jan. 17	-18 52	14.9	Mar. 2		3.0	26		2.3	Mar. 2		52.8
Nov. 9		4.5	Nov. 17		17.4	4		2.1	27		2.0	22		51.7
16		4.5	19		15.5	19		2.4	30		2.1	25		51.9
17		4.9	57 Piscium.			22		3.1	May 2		4.2	30		52.0
22 Andromedæ.			Jan. 26 +14 35 46.8			23		3.2	6		3.5	Nov. 30		52.2
Jan. 25	+45 10	34.8	Groombridge 144 S.P.			25		4.0	9		2.2	$\theta^1$ Arietis.		
$\gamma$ Pegasi.			Mar. 21	+88 9	22.3	28		2.6	11		2.0	Nov. 19 +19 9 11.0		
Jan. 20	+14 17	17.9	23		22.4	Oct. 2		3.6	13		3.0	$\downarrow$ Arietis.		
25		18.1	25		21.6	4		2.5	16		2.0	Dec. 24 +16 59 16.9		
Sept. 24		17.9	29		21.8	5		3.1	20		3.1	A. S. C. 268.		
Nov. 5		18.2	30		23.3	8		3.4	21		2.1	Dec. 24 +6 6 54.2		
17		17.5	A. S. C. 91 S.P.			12		2.8	23		1.9	$\gamma$ Ceti.		
19		18.1	Mar. 21	+85 23	22.7	15		2.3	29		2.7	Feb. 18 +2 33 11.7		
41 Piscium.			23		22.1	17		2.5	31		2.0	Nov. 19 +20 41 31.4		
Sept. 22	+7 17	45.9	25		22.5	19		3.4	June 1		2.5	$\alpha$ Ceti.		
Nov. 16		44.0	29		23.2	20		2.6	12		3.9	Nov. 21 12.5		
17		43.7	30		24.4	26		2.6	19		2.4	Dec. 24 11.9		
47 Piscium.			Groombridge 195 S.P.			Nov. 5		3.9	July 30		2.5	$\epsilon$ Arietis.		
Jan. 17	+17 0	1.6	Mar. 21	+86 17	2.1	9		2.7	Sept. 13		2.5	Nov. 19 +20 41 31.4		
21		1.4	25		1.5	16		3.5	23		2.7	$\alpha$ Ceti.		
26		1.4	29		1.7	17		4.0	24		3.2	Feb. 18 +3 27 13.3		
$\pi$ Andromedæ.			April 8		3.6	19		2.9	26		2.6			
Jan. 17	+32 49	56.1	17		0.1	21		2.8	Oct. 2		2.2			
26		56.1	$\epsilon$ Piscium.			22		3.2	3		2.5			
$\alpha$ Cassiopeæ.			Sept. 23	+7 1	18.1	$\alpha$ Ursæ Minoris S.P.			5		2.0			
Jan. 17	+55 39	12.3	Nov. 17		17.7	Mar. 18	+88 27	2.7	9		2.2			
Feb. 6		12.4	$\downarrow^3$ Piscium.			21		3.7	10		2.4			
			Jan. 21	+18 47	52.7	23		2.7	16		1.9			
						25		2.9	17		2.7			
						29		4.0	18		2.1			
						30		3.4	20		2.6			
						April 8		3.1	24		2.7			
						$\alpha$ Ursæ Minoris S.P.			27		2.7			
									28		1.2			
									Dec. 28		1.6			
									29		1.7			
									$\theta^1$ Ceti.					
									Nov. 17	-9 0	57.2			
									19		56.5			



$\alpha$ Ceti.		Piazzi III. 165 (Pleiad.)		$\xi$ Eridani.		10 Orionis.		$\beta$ Tauri.	
Feb. 23	+ 3 27 15.0	Jan. 14	+23 21 13.1	Jan. 17	- 4 7 22.6	Jan. 21	+ 1 27 40.2	Jan. 28	+28 27 50.8
Mar. 4	14.6	17	12.4	21	22.9	24	39.9	29	52.1
Nov. 21	14.2	21	12.4					Feb. 5	51.2
Dec. 24	13.8							22	51.6
31	13.1	Groombridge 750.		$\nu^1$ Tauri.		$\nu$ Tauri.		April 13	52.6
$\delta$ Arietis.		Jan. 14	+85 6 58.1	Nov. 21	+22 36 33.0	Jan. 24	+21 21 12.9	23	51.5
Nov. 19	+19 6 47.0	15	58.5	46 Eridani.		16 Orionis.		May 10	51.6
$\alpha$ Persei.		Groombridge 750 S.P.		Jan. 15	- 7 4 54.7	Jan. 21	+ 9 36 57.5	$\gamma$ Orionis.	
Jan. 10	+49 16 54.9	May 13	+85 6 61.7	17	53.7	28	58.1	Jan. 10	+ 6 11 52.4
Mar. 22	55.2	14	58.4	A. S. C. 526.		29	57.9	14	51.6
29	55.6	16	59.7	Jan. 21	- 7 10 40.8	$\alpha$ Aurigæ.		15	50.0
Nov. 21	55.0	22	60.5			Jan. 14	+45 49 32.2	17	50.1
30	54.1	27	58.6	$\alpha$ Tauri.		21	32.9	21	52.4
Dec. 24	55.0	$\gamma^1$ Eridani.		Jan. 10	+16 10 46.4	23	33.8	29	52.3
Groombridge 642 S.P.		Jan. 24	-13 58 16.8	14	47.2	28	33.4	$\delta$ Orionis.	
May 13	+86 7 13.5	35 Eridani.		23	46.3	April 13	33.8	Feb. 5	- 0 25 27.4
16	12.9	Jan. 14	- 2 0 20.4	24	47.2	23	33.2	22	27.4
22	13.3	15	20.5	April 13	45.7	May 10	34.0	April 18	28.1
27	13.0	17	20.4	23	46.8	27	33.5	$\alpha$ Leporis.	
June 1	13.8	37 Tauri.		24	46.1	28	34.3	Jan. 14	-17 56 33.5
$\epsilon$ Eridani.		Jan. 24	+21 38 11.4	May 10	45.5	29	33.2	15	34.4
Jan. 24	-10 0 25.7	Nov. 21	10.6	June 12	46.6	June 1	33.6	17	33.6
* Pleiad. R.A. 3 <sup>h</sup> 37 <sup>m</sup> 46 <sup>s</sup> .		37 Eridani.		14	47.5	5	33.9	21	33.4
Jan. 14	+23 13 19.8	Jan. 15	- 7 20 59.4	$\tau$ Tauri.		12	33.2	28	32.4
15	17.6	17	58.7	Jan. 24	+22 38 31.6	$\beta$ Orionis.		$\epsilon$ Orionis.	
17	20.3	45 Tauri.		$\mu$ Eridani.		Jan. 14	- 8 23 34.9	Feb. 5	- 1 18 37.9
$\eta$ Tauri.		Jan. 21	+ 5 5 54.3	Jan. 14	- 3 33 18.7	28	34.8	22	37.6
Jan. 24	+23 36 6.1	24	56.2	15	19.6	29	34.4	April 18	38.1
Mar. 22	5.5	66 Tauri.		17	19.5	Feb. 1	34.5	* R. A. 5 <sup>h</sup> 31 <sup>m</sup> 55 <sup>s</sup> .	
Nov. 21	5.8	Jan. 14	+ 9 4 49.0	A. S. C. 552.		Groombridge 944.		Jan. 2	+27 40 51.9
30	5.4	15	48.2	Jan. 21	+66 3 29.7	Jan. 14	+85 5 19.8	14	51.7
Dec. 31	6.4	Jan. 14	+ 9 4 49.0	24	30.2	Groombridge 944 S.P.		15	51.2
26 Tauri (Pleiadum).		15	48.2	28	29.6	June 29	+85 5 21.0	$\zeta$ Orionis.	
Jan. 15	+23 21 32.2	10 Camelopardi.		$\lambda$ Leporis.		July 1	20.7	Jan. 17	- 2 2 0.6
21	33.1	Jan. 14	+60 11 47.8	Jan. 24	-13 20 53.8	3	19.8	21	0.3
24	32.1	15	47.5	28	53.2	4	20.1	23	0.8
		17	48.7			8	20.1	24	0.9

* R. A. 5 <sup>h</sup> 34 <sup>m</sup> 14 <sup>s</sup> .	α Aurigæ.	A. S. C. 816.	Groombridge 1119 S.P.	ε Canis Minoris.
Jan. 2 +27 39 2.0 14 2.2 15 2.6	Feb. 22 +29 32 60.9 23 59.9 Mar. 21 60.0 Sept. 29 59.8	Feb. 27 -17 57 6.1	July 9 +89 3 4.2 15 4.7	Mar. 2 +9 35 15.0 6 14.8
52 Orionis.	46 Aurigæ.	54 Aurigæ.	π <sup>3</sup> Canis Majoris.	α Geminorum following.
Jan. 28 +6 23 27.6 Feb. 5 28.0	Feb. 5 +49 21 40.5 25 40.4 27 39.5	Jan. 5 +28 23 53.6	Feb. 25 -19 56 9.3 26 10.8 27 9.2	Jan. 27 +32 14 2.7 Mar. 2 3.4 5 3.2 6 3.4 12 3.0 23 3.5
136 Tauri.	μ Geminorum.	26 Geminorum.	63 Aurigæ.	δ <sup>2</sup> Canis Minoris.
Feb. 22 +27 34 1.0 Mar. 21 0.7	Jan. 1 +22 35 21.8 8 22.2 11 21.7 29 20.0 Feb. 6 20.7 23 19.9 Mar. 21 21.0 Sept. 29 20.6	Jan. 5 +17 47 47.3	Feb. 5 +39 34 32.1 23 31.4 24 33.0	Feb. 23 +3 37 40.3 24 39.9 25 39.2
α Orionis.	51 (Hevelii) Cephei.	ε Geminorum.	τ Geminorum.	δ <sup>3</sup> Canis Minoris.
Jan. 1 +7 22 13.9 11 15.2 29 14.0 Mar. 21 15.3 April 18 14.8 June 1 13.9 5 13.9	Jan. 1 +87 15 48.0 2 47.4 8 47.7 11 47.1 14 47.1 15 47.1 17 47.1 23 47.2 26 46.6 28 46.9 Feb. 7 47.1 Sept. 29 47.3 Dec. 20 47.2	Jan. 26 +25 16 59.7 27 60.2 Feb. 22 60.6 23 60.2 Sept. 29 61.6	Jan. 27 +30 30 6.3 Dec. 21 7.9	Feb. 26 +3 42 54.7 27 54.7 Mar. 2 55.4
β Aurigæ.	51 (Hev.) Cephei S.P.	ξ <sup>2</sup> Geminorum.	20 Monocerotis.	δ <sup>3</sup> Canis Minoris.
Jan. 2 +44 55 19.8 14 19.9 15 20.1 17 21.2	July 9 +87 15 47.5 16 46.7 17 46.8 Oct. 18 47.9 19 46.5 28 47.1	Jan. 5 +13 3 48.7	Feb. 25 -3 59 28.9 26 29.0 27 27.4	Feb. 26 +3 42 54.7 27 54.7 Mar. 2 55.4
θ Aurigæ.	13 Monocerotis.	43 Camelopardi.	22 Monocerotis.	25 Monocerotis.
Jan. 21 +37 11 36.5 24 37.3 28 37.2	Jan. 29 +7 26 39.1 Feb. 5 40.5 23 39.9	Feb. 27 +69 3 46.0	Mar. 2 -0 13 55.4	Mar. 5 -3 45 25.0 6 23.7 12 27.1
η Leporis.	33 Geminorum.	A. S. C. 834.	δ Geminorum.	α Canis Minoris.
Jan. 29 -14 12 8.1 Feb. 5 8.2 23 6.9	Jan. 5 +16 22 46.2	Feb. 5 +77 9 55.5 23 55.2 25 54.6	Jan. 27 +22 16 18.8 29 17.8 Feb. 24 19.4 Mar. 2 20.2 Sept. 29 20.5	Jan. 27 +5 37 56.1 Feb. 24 56.3 26 56.1 Mar. 5 57.7 6 56.1 23 54.6 May 11 56.2 16 55.5 29 54.9 30 55.4 31 55.1 June 3 55.1 14 53.8 16 54.4
τ Leporis.	Groombridge 1119.	α Canis Majoris.	ι Geminorum.	26 Monocerotis.
Feb. 23 -19 9 4.5	Jan. 27 +89 3 1.2 28 3.8 Feb. 5 4.3 23 2.9	Jan. 27 -16 30 1.5 Feb. 26 2.6 April 24 1.8 May 6 4.5 Sept. 29 0.8	Feb. 23 +28 6 40.4 24 40.9 Sept. 29 41.8	Mar. 23 -9 10 49.7
A. S. C. 761.			1 Canis Minoris.	
Jan. 21 +69 21 47.8 28 48.1 Feb. 5 48.2			Feb. 5 +11 58 42.9 25 43.1 26 42.5	
			ε Canis Minoris.	
			Feb. 27 +9 35 14.9	



$\alpha$ Geminorum.		13 Argûs.		A. S. C. 1041.		$\epsilon$ Ursæ Majoris.		26 Hydræ.	
Jan. 27 28	+ 24 46 40.1 40.7	Mar. 6	+ 2 46 15.5	Feb. 24 27 Mar. 12	- 19 2 14.0 14.0 14.2	Mar. 12 21 24	+ 48 40 7.8 6.4 6.4	Feb. 27 Mar. 2 6	- 11 17 55.5 56.0 55.4
$\beta$ Geminorum.		29 Monocerotis.		$\pi^2$ Ursæ Majoris.		A. S. C. 1099.		27 Hydræ.	
Feb. 23 24 Mar. 5 May 16 29	+ 28 24 30.7 31.4 30.2 30.8 32.4	Feb. 23 24 27	- 2 31 11.5 10.5 11.8	Mar. 23 25 April 4	+ 64 52 56.8 56.4 55.6	Feb. 27 Mar. 2 6	+ 47 47 16.8 15.3 16.4	Mar. 25 30 April 11	- 8 52 35.3 34.4 34.2
30 31 June 3 14 16 Sept. 29	32.2 30.7 32.9 32.4 29.8 32.6	16 Argûs.		* R. A. 8 <sup>h</sup> 28 <sup>m</sup> 20 <sup>s</sup> .		A. S. C. 1103.		A. S. C. 1135.	
$\pi$ Canis Minoris.		Mar. 2 5 23	- 18 46 39.9 38.9 40.0	Mar. 12 23	+ 20 17 20.1 18.5	Mar. 12 21 23	+ 39 5 27.2 25.3 26.2	Mar. 12 21 23	+ 82 1 38.9 38.3 38.9
4 Argûs.		Groombridge 1418.		$\gamma$ Cancrî.		$\omega$ Hydræ.		$\alpha$ Hydræ.	
Feb. 23 24 25	+ 11 9 16.6 17.0 16.6	Mar. 6 12 21 23 25	+ 85 36 1.1 2.6 3.0 2.3 1.7	Feb. 24 25	+ 22 2 34.9 33.1	Mar. 25	+ 5 43 52.2	Mar. 23 29 30 April 4 8	- 7 57 50.3 50.8 51.0 51.5 50.7
6 Argûs.		$\lambda$ Cancrî.		$\delta$ Cancrî.		$\xi$ Cancrî.		$\zeta$ Ursæ Majoris.	
Feb. 26 27 Mar. 2	- 14 10 39.8 37.4 39.3	Feb. 24	+ 24 31 25.0	Jan. 29	+ 18 44 27.4	Jan. 29 Mar. 24 25	+ 22 41 31.7 32.0 31.5	11 21 May 19	50.9 51.4 51.3
14 Canis Minoris.		22 Argûs.		$\epsilon$ Cancrî.		20 Hydræ.		$\theta$ Ursæ Majoris.	
Mar. 5 23	- 16 49 23.0 22.2	Feb. 24 Mar. 2 6	- 12 32 30.2 29.5 28.8	Feb. 27 Mar. 2 12	+ 29 20 31.8 30.8 31.2	Feb. 27 Mar. 2 6	- 8 8 16.3 18.1 16.3	Mar. 24 29 30 April 4 May 19	+ 52 24 23.3 24.3 23.3 24.3 23.8
28 Monocerotis.		1 Hydræ.		$\epsilon$ Hydræ.		A. S. C. 1117.		$\lambda$ Leonis.	
Feb. 23 24 25	+ 2 38 55.0 56.5 55.6	Mar. 25	- 3 14 2.8	Mar. 12 25 April 4	+ 7 0 17.3 16.4 16.7	Mar. 12 21 23	+ 21 56 32.3 30.4 31.1	June 1 8	23.5 25.0
6 Cancrî.		$\circ$ Ursæ Majoris.		12 Hydræ.		18 Ursæ Majoris.		10 Leonis Minoris.	
Jan. 28 Mar. 23	+ 28 14 21.5 23.3	Mar. 12 21 23	+ 61 14 56.3 55.0 55.1	Mar. 21 23 25	- 12 57 47.9 47.1 46.9	Mar. 25 30	+ 54 40 53.3 51.9	Feb. 25 April 21	+ 23 40 25.1 25.8
$\theta$ Cancrî.		A. S. C. 1075.		83 Cancrî.		Mar. 24 25		+ 37 6 29.5 27.6 30.5	
				April 4		+ 18 23 0.2 0.8			

33 Hydræ.		♄ Leonis.		Groombridge 1620.		3 Hydræ & Crateris.		♃ Ursæ Majoris.	
Mar. 21	- 5 11 59.6	Mar. 25	+ 13 12 35.1	Mar. 12	+ 85 3 44.7	Mar. 25	- 16 26 58.5	Mar. 25	+ 45 22 15.5
23	57.8			21	45.4	29	59.8	29	14.4
29	59.6			23	46.5	April 8	57.6	30	14.7
♄ Hydræ.		A. S. C. 1199.		γ Leonis.		53 Leonis.		δ Leonis.	
Mar. 30	- 0 24 55.5	Feb. 27	- 12 31 23.0	Feb. 27	+ 20 39 10.0	Feb. 28	+ 11 23 43.1	Feb. 28	+ 21 24 17.8
April 8	55.3	Mar. 2	25.9	April 23	12.0			Mar. 18	16.7
10	55.1	21	25.1					April 17	17.0
♂ Leonis.		♂ <sup>2</sup> Hydræ.		μ Ursæ Majoris.		α Hydræ & Crateris.		26	16.9
Feb. 25	+ 10 37 16.3	Mar. 25	- 12 17 11.9	Mar. 2	+ 42 18 23.6	Mar. 2	- 17 26 33.7	27	16.5
26	16.7	29	8.9	6	24.3	12	36.0	May 2	17.3
♂ Leonis.		30	11.5	12	24.2	25	34.1	6	18.5
April 21	+ 14 45 17.1	η Leonis.		30 Leonis Minoris.		β Ursæ Majoris.		7	16.6
		Mar. 25	+ 17 32 41.1	Mar. 21	+ 34 36 48.1	Mar. 29	+ 57 14 37.6	9	16.6
		α Leonis.		23	48.8	May 10	38.8	13	16.9
		Feb. 27	+ 12 45 4.4	25	49.2	α Ursæ Majoris.		June 19	16.7
Mar. 30	+ 24 30 44.0	April 8	4.5	μ Hydræ.		May 6	+ 62 37 8.4	July 8	17.1
April 10	43.9	10	5.0	Mar. 29	- 16 0 59.7	7	6.8	Feb. 28	- 13 54 29.8
21	44.0	21	5.1	April 8	59.5	9	6.7	Mar. 18	28.9
May 19	44.4	26	5.3	17	59.9	June 19	7.1	April 17	28.5
June 3	43.8	June 5	4.5	37 Ursæ Majoris.		29	6.7	24	28.1
16	45.7	16	6.7	Mar. 2	+ 57 54 32.4	July 4	7.6	May 2	27.9
♂ Ursæ Majoris.		17	5.5	6	32.6	8	7.5	9	29.0
Feb. 27	+ 59 47 29.9	19	4.3	12	33.5	10	6.6	13	28.7
Mar. 2	29.1	July 4	5.6	1 Hydræ & Crateris.		15	6.5	♂ Leonis.	
6	28.6	8	4.0	Mar. 21	- 15 30 44.7	30	6.5	Mar. 12	+ 6 54 39.3
♂ Ursæ Majoris.		15	4.6	23	45.5	Sept. 12	6.6	18	37.8
Mar. 12	+ 54 48 47.0	17 Sextantis.		25	45.3	20	7.0	21	37.2
21	44.7	Feb. 27	- 7 37 10.7	37 Leonis Minoris.		22	7.9	♄ Leonis.	
23	45.5	Mar. 21	12.4	Mar. 29	+ 32 48 37.3	* R. A. 10 <sup>h</sup> 53 <sup>m</sup> 53 <sup>s</sup> .		April 8	+ 11 24 55.6
22 Leonis.		25	12.5	30	37.6	April 8	+ 9 44 2.3	17	54.1
Mar. 25	+ 25 9 11.9	λ <sup>2</sup> Hydræ.		April 8	37.3	χ Leonis.		* R. A. 11 <sup>h</sup> 17 <sup>m</sup> 6 <sup>s</sup> .	
29	13.0	Mar. 29	- 11 33 40.2	42 Leonis Minoris.		Feb. 27	+ 8 12 17.2	Mar. 25	+ 8 50 22.6
30	12.3	30	39.8	Mar. 6	+ 31 31 40.9	Mar. 25	17.6	♄ Leonis.	
		April 8	38.8	12	40.7	29	17.7	April 24	+ 3 44 31.6
		Groombridge 1620.		23	41.7	67 Leonis.			
		Feb. 27	+ 85 3 46.7			Mar. 2	+ 25 31 43.4		
		Mar. 2	46.2			12	44.3		
						23	44.3		



* R. A. 11 <sup>h</sup> 21 <sup>m</sup> 13 <sup>s</sup> .		γ Ursæ Majoris.		12 Canum Venaticorum.		η Ursæ Majoris.		ε Bootis.	
Mar. 21	+ 8 29 11.9	Aug. 1	+ 54 35 23.6	April 30	+ 39 11 21.2	Sept. 21	+ 50 7 9.6	Oct. 2	+ 27 45 22.8
υ Leonis.		Sept. 13	23.5	July 30	21.3	25	9.7	28	23.0
		25	24.4	Sept. 13	21.0	Oct. 5	8.7	29	23.3
		Groombridge 1850.		26	20.2	11	8.2	α <sup>2</sup> Libræ.	
Feb. 28	+ 0 3 52.6			Oct. 2	21.0	15	9.9		
* R. A. 11 <sup>h</sup> 29 <sup>m</sup> 2 <sup>s</sup> .		Mar. 18	+ 86 28 47.0	Dec. 27	22.4	17	9.4		
		21	46.3	28	21.7	19	9.0		
		25	46.5	θ Virginis.		24	9.1	May 22	- 15 22 5.9
Mar. 12	+ 7 9 36.6	29	44.9			27	8.0	June 29	4.3
ν Virginis.		30	44.5	Mar. 29	- 4 40 39.3	28	8.9	β Ursæ Minoris.	
		ο Virginis.		May 23	39.1	29	8.4		
		Mar. 29	+ 9 37 36.7	α Virginis.		η Bootis.		April 29	+ 74 48 48.7
Feb. 27	+ 7 25 52.7	April 24	37.8	Mar. 30	- 10 19 6.3	April 27	+ 19 12 27.0	May 22	48.9
28	52.2	* R. A. 11 <sup>h</sup> 59 <sup>m</sup> 20 <sup>s</sup> .		April 10	5.6	May 23	26.3	June 10	49.7
Mar. 2	50.9	Feb. 27	+ 5 24 36.7	26	7.5	June 12	28.7	14	48.7
β Leonis.		η Virginis.		27	6.1	15	26.7	29	48.9
				30	8.7	Sept. 25	26.6	July 3	49.2
Feb. 27	+ 15 28 18.8			May 20	7.5	Oct. 2	25.8	Sept. 17	50.3
28	19.5			23	7.4	15	27.4	Oct. 11	48.2
Mar. 2	17.8			June 10	8.2	17	26.2	18	48.4
5	18.7			ζ Ursæ Majoris.		19	25.2	30	48.9
12	19.1			April 20	+ 55 46 4.4	28	26.5	31	48.6
18	19.1			30	4.5	Dec. 28	26.2	Nov. 8	49.8
21	17.5			May 20	5.2	29	25.3	10	49.4
23	18.2			31	5.3	α Bootis.		11	48.8
25	18.0			Oct. 3	4.0	Jan. 8	+ 20 1 24.5	β Libræ.	
29	18.5			Dec. 29	6.3	May 28	25.2	May 22	- 8 47 2.5
April 8	18.3			Groombridge 2007.		June 6	25.7	June 29	3.3
17	18.4			Mar. 21	+ 85 35 45.0	12	25.3	July 3	2.4
26	18.4			25	45.9	14	25.9	A. S. C. 1752.	
May 2	19.0			29	44.7	15	25.6	May 13	- 16 41 41.6
7	18.1			April 18	46.3	17	24.7	27	41.4
11	17.4			26	45.9	17	23.8	α Coronæ borealis.	
13	19.1			η Ursæ Majoris.		21	23.4	May 27	+ 27 15 37.9
21	17.6			May 20	+ 50 7 8.7	25	25.9	June 17	38.0
July 10	18.6			23	8.1	Oct. 5	23.6	July 1	38.3
30	18.2			June 10	9.6	18	24.2	3	37.8
β Virginis.				12	8.9	21	24.4	Oct. 13	37.5
Feb. 28	+ 2 40 19.6					29	24.3	Nov. 12	37.6
April 24	17.8					ε Bootis.		19	37.5
γ Ursæ Majoris.						April 29	+ 27 45 22.2	ρ <sup>2</sup> Serpentis.	
May 11	+ 54 35 23.9					May 28	21.6		
16	24.0					June 14	23.0		
July 10	23.5					29	21.9	May 16	+ 16 39 23.9
20	25.0								
27	23.4								

Groombridge 2283.			$\eta$ Draconis.			* R. A. 17 <sup>h</sup> 16 <sup>m</sup> 3 <sup>s</sup> .			* R. A. 17 <sup>h</sup> 45 <sup>m</sup> 21 <sup>s</sup> .			$\delta$ Ursæ Minoris S.P.		
May 13	+87	50 4.8	June 10	+61	52 49.1	July 3	+32	8 41.9	July 3	+41	14 50.5	Jan. 14	+86	35 28.4
16		5.9	13		48.5	4		40.6	4		48.0	15		27.8
22		5.1	July 12		48.5	8		39.9	8		47.2	17		27.2
27		6.5	24		48.8	* R. A. 17 <sup>h</sup> 21 <sup>m</sup> 0 <sup>s</sup> .			* R. A. 17 <sup>h</sup> 50 <sup>m</sup> 4 <sup>s</sup> .			23		27.3
28		6.7	27		48.5	* R. A. 16 <sup>h</sup> 42 <sup>m</sup> 40 <sup>s</sup> .			$\gamma$ Draconis.			28		27.3
Groombridge 2283 S.P.			Oct. 4		48.1	July 1	+15	39 42.6	July 2	+51	30 37.8	Feb. 5		26.9
Jan. 14			Nov. 16		48.3	2		41.5	9		37.7	6		26.4
			27		48.9	3		42.2	12		37.6	7		27.5
$\alpha$ Serpentis.			* R. A. 16 <sup>h</sup> 43 <sup>m</sup> 56 <sup>s</sup> .			* R. A. 17 <sup>h</sup> 23 <sup>m</sup> 43 <sup>s</sup> .			16		37.2	22		27.4
May 27	+ 6	56 11.9	July 1	+16	4 27.2	July 3	+35	4 7.5	18		37.7	23		26.9
June 8		11.9	3		24.7	4		6.2	$\delta$ Ursæ Minoris.			25		27.7
July 15		11.8	4		23.1	8		6.8	Oct. 7		38.2	27		26.7
Sept. 23		13.0	$\epsilon$ Ursæ Minoris.			* R. A. 17 <sup>h</sup> 26 <sup>m</sup> 7 <sup>s</sup> .			21		38.5	Mar. 21		25.5
Oct. 13		12.7	July 4	+82	17 25.9	July 3	+34	56 32.1	Nov. 22		36.9	Sept. 29		28.4
Nov. 12			24		27.3	4		30.7	27		37.6	Dec. 20		27.5
Nov. 19			25		28.0	8		31.3	Dec. 22		36.8	$\alpha$ Lyrae.		
$\zeta$ Ursæ Minoris.			Nov. 23		27.5	$\beta$ Draconis.			24		37.4	July 9	+86	57 55.9
May 14	+78	17 11.6	$\alpha$ Herculis.			July 20	+52	25 24.0	$\delta$ Ursæ Minoris.			15		56.5
June 6		10.9	July 12	+14	34 44.9	29		23.7	Jan. 1	+86	35 27.8	16		57.0
8		11.0	24		45.4	Oct. 7		24.2	July 2		27.3	17		57.0
July 1		12.7	29		27.4	21		23.7	9		28.0	18		56.6
Oct. 13		11.6	Nov. 22		44.7	Dec. 22		24.0	15		28.1	$\beta$ Lyrae.		
Nov. 20			23		44.9	$\alpha$ Ophiuchi.			16		27.5	Jan. 1	+38	38 16.4
$\theta$ Draconis.			* R. A. 17 <sup>h</sup> 11 <sup>m</sup> 30 <sup>s</sup> .			July 18	+12	40 57.0	17		27.3	11		16.2
July 8	+58	59 49.1	July 1	+28	54 37.4	Nov. 22		56.4	18		28.1	July 2		16.2
Oct. 13		49.3	3		36.4	23		57.4	24		27.1	17		15.9
$\delta$ Ophiuchi.			4		35.8	* R. A. 17 <sup>h</sup> 28 <sup>m</sup> 1 <sup>s</sup> .			27		27.7	25		16.6
May 14	- 3	16 26.4	* R. A. 17 <sup>h</sup> 15 <sup>m</sup> 30 <sup>s</sup> .			July 3	+34	39 20.0	Oct. 18		28.0	27		16.3
June 10		28.5	July 1	+32	1 26.2	4		19.2	19		28.3	Aug. 1		17.2
July 1		28.1	4		24.7	* R. A. 17 <sup>h</sup> 29 <sup>m</sup> 0 <sup>s</sup> .			28		28.5	Oct. 31		15.8
Sept. 23		27.6	8		25.6	July 3	+34	51 37.3	30		27.7	Nov. 13		16.2
$\alpha$ Scorpii.			$\delta$ Ursæ Minoris S. P.			4		35.7	Nov. 20		28.2	26		16.2
July 21	-26	4 3.3	Jan. 1	+86	35 27.2	* R. A. 17 <sup>h</sup> 16 <sup>m</sup> 3 <sup>s</sup> .			22		27.8	28		15.9
$\eta$ Draconis.			2		28.2	July 3	+32	8 41.9	Dec. 21		27.8	$\beta$ Lyrae.		
May 14	+61	52 48.2	8		27.3	4		40.6	23		28.8	July 25	+33	10 48.0
			8		36.6	8		47.2	25		28.1	Oct. 31		48.4
									$\delta$ Ursæ Minoris S. P.			Nov. 13		48.2
									Jan. 1	+86	35 27.2	Dec. 21		48.8
									2		28.2	28		48.1
									8		27.3			
									11		27.4			



ζ Aquilæ.		λ Ursæ Minoris.		ζ Cygni.		δ Capricorni.		μ Pegasi.	
July 20	+ 13 37 44.8	Nov. 22	+88 49 34.7	Jan. 15	+29 34 11.7	Oct. 17	-16 51 15.5	Jan. 2	+23 45 10.6
Aug. 1	45.1	26	34.2	Feb. 1	11.7	18	14.7		
Dec. 21	45.9	28	33.7	Sept. 19	10.9				
		30	33.5	20	11.9				
δ Draconis.		Dec. 6	34.4	Oct. 4	12.0	α Aquarii.		ι Cephei.	
Jan. 1	+67 22 41.7			Nov. 28	11.8	Jan. 3	- 1 5 56.1	Jan. 15	+65 21 18.1
		λ Ursæ Minoris S. P.		Dec. 6	10.8	May 6	56.0	21	17.7
		Feb. 23	+88 49 33.7	16	10.9	Sept. 24	56.8		
δ Aquilæ.		24	32.5	α Cephei.		28	57.9	λ Aquarii.	
		25	33.4	Jan. 9	+61 54 19.3	Oct. 7	57.6	Oct. 19	- 8 26 4.1
Sept. 17	+ 2 47 56.8	26	32.6	15	18.6	8	57.2		
		27	32.7	21	17.9	10	57.7		
γ Aquilæ.		α Delphini.		26	18.5	Dec. 17	56.5	α Piscis Australis.	
		Jan. 9	+15 20 53.4	Sept. 20	18.9	ι Aquarii.		Oct. 15	-30 28 18.9
Sept. 18	+10 13 32.1	α Cygni.		Oct. 4	18.8	Oct. 17	-14 38 51.8	19	30.0
Nov. 11	32.2	Jan. 9	+44 42 29.0	9	19.4	18	51.6	29	16.8
α Aquilæ.		12	28.8	Nov. 13	19.0	ζ Cephei.		β Pegasi.	
Jan. 8	+ 8 26 52.8	15	28.9	Dec. 16	19.0	Jan. 3	+57 24 33.8	Jan. 2	+27 12 39.6
12	53.5	22	28.7	24	19.6	15	33.6	9	38.9
15	54.0	β Aquarii.		β Cephei.		θ Aquarii.		15	40.5
16	52.8	Oct. 8	- 6 16 31.0	Jan. 3	+69 51 16.5			21	39.1
Sept. 18	53.4	9	32.5	21	17.4	Sept. 20	- 8 34 55.8	Feb. 18	39.8
		β Cephei.		22	17.7	21	54.7	25	39.3
Nov. 11	52.9	Jan. 3	+69 51 16.5	25	17.5	σ Aquarii.		26	39.7
Dec. 6	52.8	21	17.4	26	17.6			27	40.4
25	53.6	Feb. 6	16.9	Oct. 8	16.9	Sept. 20	-11 29 59.7	Oct. 20	41.7
28	53.0	Sept. 28	18.0	9	17.5	21	57.3	Nov. 5	38.0
α² Capricorni.		10	17.4	ε Cygni.		58 Aquarii.		Dec. 31	40.1
Sept. 18	-13 2 18.0	Groombridge 3548 S.P.		Jan. 9	+33 22 14.7			α Pegasi.	
19	18.7	Feb. 27	+86 21 29.2	η Cephei.		Oct. 18	-11 43 42.4	Jan. 2	+14 20 26.4
Nov. 28	19.3	Mar. 2	30.6	Jan. 15	+61 12 54.1	ζ Pegasi.		Feb. 15	25.4
π Capricorni.		6	31.2	16	54.0			Sept. 22	26.3
Sept. 19	-18 44 3.7	12	30.3	Groombridge 3402 S.P.		Jan. 2	+ 9 59 32.8	Oct. 15	26.2
λ Ursæ Minoris.		21	29.2	Mar. 2	+88 37 33.1	Dec. 17	33.1	59 Pegasi.	
Sept. 18	+88 49 33.7	ε Pegasi.		12	31.5	26	33.7		
19	34.3	Jan. 26	+ 9 8 24.2	21	32.8	η Pegasi.		Jan. 2	+ 7 50 49.2
20	33.0	Sept. 28	23.9	23	32.5	Jan. 15	+29 22 52.0	60 Pegasi.	
21	33.2	Oct. 8	22.5	24	33.4	21	51.3	Jan. 9	+25 58 43.9
Oct. 2	34.3	10	23.0						
Nov. 16	34.1								
20	34.0								

$\phi$ Aquarii.		$\alpha^1$ Piscium.		$\delta$ Piscium.		$\gamma$ Cephei.		$\omega$ Piscium.	
Sept. 21	- 6 54 54.8	Sept. 21	+ 0 22 31.3	Sept. 22	+ 4 45 15.1	Oct. 12	+ 76 44 3.1	Sept. 22	+ 5 58 19.7
22	55.1	22	31.0	Oct. 12	15.5	26	3.1	Nov. 16	18.7
96 Aquarii.		Groombridge 4101 S.P.		Nov. 5	15.6	$\lambda$ Piscium.		17	17.8
Oct. 19				16	15.0	Oct. 19		29 Piscium.	
				$\gamma$ Cephei.		20			
65 Pegasi.		Mar. 2		Jan. 20	+ 76 44 2.5	+ 0 53 40.2		Oct. 19	
		5		Feb. 15	2.8	40.6		20	
		6		25	2.7	78 Pegasi.		- 3 55 24.4	
		12		27	2.6			25.4	
Jan. 9		18		Mar. 4	4.2	Jan. 15			
+ 19 56 49.4						+ 28 28 11.8			



CATALOGUE  
OF THE  
MEAN RIGHT ASCENSIONS AND DECLINATIONS  
OF THE STARS OBSERVED,

FOR JANUARY 1, 1839.

CATALOGUE OF THE MEAN RIGHT ASCENSIONS AND DECLINATIONS OF THE STARS OBSERVED,  
REDUCED TO JANUARY 1, 1839.

No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
2881	$\alpha$ Andromedæ.....	<i>h. m. s.</i> 0 0 4.67	<i>° ' "</i> +28 12 4.6	28	12
8	22 Andromedæ.....	.....	+45 10 34.8	...	1
13	$\gamma$ Pegasi.....	0 4 57.10	+14 17 18.0	20	6
23	41 Piscium .....	0 12 19.07	+ 7 17 44.5	3	3
32	10 Ceti .....	0 18 21.94	.....	1	...
33	47 Piscium .....	.....	+17 0 1.5	...	3
37	12 Ceti .....	0 21 49.17	.....	1	...
39	$\lambda$ Cassiopeæ.....	0 22 55.55	.....	1	...
53	$\pi$ Andromedæ.....	.....	+32 49 56.1	...	2
60	$\alpha$ Cassiopeæ.....	.....	+55 39 12.0	...	8
61	55 Piscium .....	0 31 27.71	.....	1	...
67	$\beta$ Ceti .....	0 35 30.24	-18 52 15.9	7	3
73	57 Piscium .....	.....	+14 35 46.8	...	1
78	$\eta$ Cassiopeæ.....	0 39 24.17	.....	1	...
81	$\delta$ Piscium .....	0 40 20.03	.....	3	...
82	64 Piscium .....	0 40 31.30	.....	2	...
84	{ 65 Piscium preceding .....	0 41 14.92	.....	3	...
	{ 65 Piscium following .....	0 41 15.34	.....	3	...
85	$\phi^2$ Ceti .....	0 42 3.44	.....	3	...
...	Groombridge 144 S. P.	0 42 28.65	+88 9 22.3	5	5
87	66 Piscium .....	0 46 4.21	.....	3	...
88	36 Andromedæ.....	0 46 21.44	.....	4	...
89	$\gamma$ Cassiopeæ.....	0 47 2.64	.....	2	...
90	67 Piscium .....	0 47 19.50	.....	2	...
91	Cephei S. P.....	0 47 56.27	+85 23 23.0	5	5
95	$\phi^3$ Ceti .....	0 47 56.91	.....	3	...
...	Groombridge 195 S. P.	0 50 43.47	+86 17 1.8	5	5
103	$\epsilon$ Piscium .....	0 54 35.50	+ 7 1 17.9	4	2
104	25 Ceti .....	0 54 54.03	.....	3	...
109	27 Ceti .....	0 57 33.10	.....	1	...
110	28 Ceti .....	0 58 0.48	.....	4	...
114	30 Ceti .....	0 59 40.48	.....	2	...
118	$\eta$ Ceti .....	1 0 29.48	.....	3	...
119	$\beta$ Andromedæ.....	1 0 44.16	.....	3	...
120	$\psi^3$ Piscium .....	1 1 13.30	+18 47 52.7	2	1
121	$\theta$ Cassiopeæ.....	1 1 20.62	.....	3	...
115	$\alpha$ Ursæ Minoris .....	1 1 54.45	+88 27 3.0	53	40
...	..... S. P.....	54.74	2.7	45	50
124	32 Ceti .....	1 2 7.43	.....	3	...
126	$\tau$ Piscium .....	1 2 48.51	.....	3	...
127	$\chi$ Piscium .....	1 2 48.63	.....	2	...
147	$\delta$ Cassiopeæ.....	1 15 20.48	.....	2	...
148	44 Ceti .....	1 15 56.78	.....	1	...
149	$\theta^1$ Ceti .....	1 15 58.56	- 9 0 56.8	8	2
152	46 Ceti .....	1 17 41.99	.....	3	...
155	47 Ceti .....	1 18 54.80	.....	2	...
166	$\eta$ Piscium .....	1 22 52.63	+14 30 48.1	2	1



No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
177	50 Ceti .....	<i>h. m. s.</i> 1 28 7.80	.....	3	...
179	Ceti .....	1 29 34.84	.....	3	...
189	♂ Piscium .....	1 36 54.04	.....	3	...
196	ε Cassiopeæ .....	1 42 53.15	.....	3	...
197	ζ Ceti .....	1 43 30.84	.....	3	...
198	α Trianguli .....	1 43 55.11	.....	3	...
199	γ Arietis .....	1 44 42.40	.....	1	...
201	β Arietis .....	1 45 45.70	+20 1 6.0	1	1
202	7 Arietis .....	1 46 53.10	.....	2	...
226	Arietis .....	1 57 35.82	.....	3	...
227	α Arietis .....	1 58 6.65	+22 41 52.5	24	9
233	ι Trianguli .....	2 3 2.84	.....	1	...
234	63 Ceti .....	2 3 25.45	.....	2	...
239	θ <sup>1</sup> Arietis .....	2 9 11.17	+19 9 11.0	1	1
242	9 Persei .....	2 11 10.94	.....	2	...
243	♂ Ceti .....	2 11 12.90	.....	2	...
244	69 Ceti .....	2 13 42.06	.....	1	...
245	70 Ceti .....	2 14 0.48	.....	1	...
250	71 Ceti .....	2 16 50.44	.....	3	...
259	ψ Arietis .....	.....	+16 59 16.9	...	1
263	σ Ceti .....	2 24 27.51	.....	3	...
266	77 Ceti .....	2 26 46.22	.....	1	...
268	Ceti .....	.....	+ 6 6 54.2	...	1
276	ν Arietis .....	2 29 41.16	.....	1	...
277	33 Arietis .....	2 31 17.47	.....	3	...
280	ε Ceti .....	2 31 46.74	.....	2	...
281	84 Ceti .....	2 32 59.37	.....	1	...
287	35 Arietis .....	2 34 1.17	.....	1	...
289	γ Ceti .....	2 34 57.83	+ 2 33 12.0	6	4
298	39 Arietis .....	2 38 20.38	.....	1	...
299	Persei .....	2 39 0.05	.....	2	...
308	τ Persei .....	2 42 53.19	.....	1	...
315	Arietis .....	2 47 37.60	.....	1	...
319	ε Arietis .....	2 50 1.07	+20 41 31.4	1	1
322	λ Ceti .....	2 51 5.66	.....	1	...
323	5 Eridani .....	2 51 33.80	.....	1	...
329	γ Persei .....	2 53 10.89	.....	1	...
330	ε <sup>1</sup> Eridani .....	2 53 15.23	.....	3	...
332	α Ceti .....	2 53 52.15	+ 3 27 14.0	8	6
335	ε <sup>2</sup> Eridani .....	2 54 48.32	.....	3	...
334	ε Persei .....	2 54 53.00	.....	1	...
339	ε <sup>3</sup> Eridani .....	2 56 22.40	.....	3	...
348	δ Arietis .....	3 2 25.92	+19 6 47.0	2	1
355	ζ Eridani .....	3 8 0.96	.....	1	...
357	95 Ceti .....	3 10 8.45	.....	3	...
359	Tauri .....	3 10 36.71	.....	3	...
360	κ <sup>1</sup> Ceti .....	3 10 55.28	.....	2	...
366	κ <sup>2</sup> Ceti .....	3 12 41.88	.....	3	...
365	α Persei .....	.....	+49 16 55.0	...	6
...	Groombridge 642 .....	3 14 36.06	.....	3	...
...	..... S. P. ....	36.91	+86 7 13.3	5	5

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No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
371	Camelopardi.....	<i>h. m. s.</i> 3 16 5.05	<i>° ' "</i> .....	3	...
373	Camelopardi.....	3 17 6.63	.....	2	...
377	$\sigma$ Persei .....	3 19 15.18	.....	3	...
380	17 Eridani.....	3 22 38.01	.....	2	...
384	$\downarrow$ Persei .....	3 25 4.53	.....	3	...
385	$\epsilon$ Eridani.....	3 25 20.92	- 10 0 25.7	2	1
388	10 Tauri .....	3 28 39.64	.....	2	...
389	20 Eridani .....	3 28 57.50	.....	2	...
391	21 Eridani.....	3 31 4.48	.....	3	...
395	12 Tauri .....	3 31 28.23	.....	3	...
393	$\delta$ Persei .....	3 31 29.28	.....	3	...
397	22 Eridani.....	3 32 40.26	.....	3	...
400	Persei .....	3 34 14.22	.....	3	...
406	$\delta$ Eridani.....	3 35 32.30	.....	2	...
407	Eridani.....	3 35 52.69	.....	2	...
412	29 Tauri .....	3 37 7.40	.....	3	...
...	* $7\frac{1}{2}^m$ (Pleiadum) .....	3 37 45.64	+ 23 13 19.2	3	3
414	$\eta$ Tauri .....	3 37 55.51	+ 23 36 5.8	9	5
415	$\pi$ Eridani.....	3 38 32.09	.....	3	...
416	Tauri .....	3 38 49.44	.....	3	...
...	26 Tauri (Pleiadum) .....	3 39 23.63	+ 23 21 32.5	3	3
...	Piazzi III. 165 (Pleiad.)	3 40 24.83	+ 23 21 12.6	3	3
427	31 Tauri .....	3 43 25.46	.....	3	...
430	$\zeta$ Persei .....	3 44 1.34	.....	2	...
431	30 Eridani.....	3 44 44.67	.....	2	...
432	32 Eridani.....	3 46 12.61	.....	3	...
433	$\epsilon$ Persei .....	3 47 4.04	.....	3	...
...	Groombridge 750 .....	3 48 2.68	+ 85 6 58.3	2	2
...	..... S. P.	3.52	59.8	5	5
438	$\xi$ Persei .....	3 48 32.02	.....	3	...
440	$\gamma^1$ Eridani.....	3 50 31.18	- 13 58 16.8	8	1
445	35 Eridani.....	3 53 22.71	- 2 0 20.4	3	3
446	$\nu$ Tauri .....	3 54 35.88	.....	2	...
448	37 Tauri .....	3 55 11.12	+ 21 38 11.0	3	2
460	37 Eridani.....	4 2 31.43	- 7 20 59.0	3	2
461	45 Tauri .....	4 2 46.30	+ 5 5 55.2	2	2
462	$\mu$ Persei .....	4 3 5.91	.....	2	...
464	$\circ$ Eridani.....	4 4 0.53	.....	3	...
465	46 Tauri .....	4 4 53.19	.....	3	...
466	47 Tauri .....	4 5 11.30	.....	3	...
467	Persei .....	4 6 9.62	.....	3	...
470	39 Eridani.....	4 6 44.21	.....	3	...
469	$\mu$ Tauri .....	4 6 47.77	.....	3	...
472	40 Eridani .....	4 7 51.80	.....	3	...
491	66 Tauri .....	4 15 5.40	+ 9 4 48.6	3	2
495	$\epsilon$ Eridani .....	4 15 40.94	- 4 7 22.8	3	2
502	$\gamma^1$ Tauri .....	4 16 40.89	+ 22 36 33.0	1	1
513	44 Eridani.....	4 20 13.08	.....	3	...
521	45 Eridani.....	4 23 38.69	.....	3	...
524	46 Eridani.....	4 26 3.90	- 7 4 54.2	3	2
526	Eridani.....	4 26 24.19	- 7 10 40.8	3	1



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				Right Ascension.	Declina- tion.
527	47 Eridani.....	<i>h. m. s.</i> 4 26 26.55	<i>° ' "</i> .....	3	...
528	$\alpha$ Tauri.....	4 26 41.30	+ 16 10 46.5	24	10
530	$\nu^2$ Eridani.....	4 28 16.53	.....	3	...
532	49 Eridani.....	4 28 56.06	.....	3	...
535	51 Eridani.....	4 29 29.99	.....	3	...
539	53 Eridani.....	4 30 48.51	.....	3	...
542	Eridani.....	4 31 55.56	.....	3	...
543	$\tau$ Tauri.....	4 32 35.32	+ 22 38 31.6	1	1
547	Tauri.....	4 35 30.65	.....	3	...
551	$\mu$ Eridani.....	4 37 27.17	- 3 33 19.3	3	3
552	Camelopardi.....	4 38 5.30	+ 66 3 29.8	3	3
554	58 Eridani.....	4 40 22.61	.....	3	...
556	1 Orionis.....	4 41 6.11	.....	3	...
557	59 Eridani.....	4 41 17.96	.....	3	...
558	$\pi^1$ Orionis.....	4 41 50.51	.....	3	...
560	3 Orionis.....	4 42 37.99	.....	3	...
562	60 Eridani.....	4 42 56.40	.....	3	...
565	5 Orionis.....	4 44 59.16	.....	3	...
566	$\omega$ Eridani.....	4 44 59.11	.....	3	...
567	6 Orionis.....	4 45 51.27	.....	3	...
568	8 Orionis.....	4 45 52.18	.....	2	...
569	$\pi^2$ Orionis.....	4 46 2.19	.....	3	...
574	$\omega$ Aurigæ.....	4 48 20.18	.....	3	...
576	62 Eridani.....	4 48 28.44	.....	3	...
577	10 Camelopardi.....	4 49 7.47	+ 60 11 48.0	3	3
579	10 Orionis.....	4 50 12.30	+ 1 27 40.0	3	2
580	$\epsilon$ Aurigæ.....	4 50 25.65	.....	3	...
582	$\zeta$ Aurigæ.....	4 51 14.13	.....	2	...
583	63 Eridani.....	4 52 13.31	.....	3	...
584	64 Eridani.....	4 52 26.85	.....	3	...
585	$\epsilon$ Tauri.....	4 53 28.63	+ 21 21 12.9	1	1
586	$\psi$ Eridani.....	4 53 38.07	.....	3	...
588	$\eta$ Aurigæ.....	4 55 14.06	.....	3	...
599	66 Eridani.....	4 58 48.07	.....	3	...
601	14 Orionis.....	4 59 7.10	.....	3	...
603	$\beta$ Eridani.....	4 59 56.17	.....	3	...
605	16 Orionis.....	5 0 28.52	+ 9 36 57.8	1	3
608	$\mu$ Aurigæ.....	5 2 25.37	.....	2	...
613	$\epsilon$ Leporis.....	5 4 47.45	.....	1	...
612	$\alpha$ Aurigæ.....	5 4 48.34	+ 45 49 33.5	42	13
619	$\beta$ Orionis.....	5 6 48.14	- 8 23 34.6	26	4
620	18 Orionis.....	5 7 7.77	.....	1	...
625	$\tau$ Orionis.....	5 9 47.54	.....	3	...
...	Groombridge 944.....	5 11 6.21	+ 85 5 19.8	1	1
...	..... S. P.	5 20	20.3	5	5
631	$\lambda$ Leporis.....	5 12 9.61	- 13 20 53.5	3	2
639	23 Orionis.....	5 14 22.54	.....	3	...
642	$\beta$ Tauri.....	5 16 7.13	+ 28 27 51.6	31	7
643	$\xi$ Leporis.....	5 16 8.30	.....	1	...
645	27 Orionis.....	5 16 18.00	.....	2	...
648	$\gamma$ Orionis.....	.....	+ 6 11 51.5	...	6

No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
653	$\psi^2$ Orionis.....	<i>h. m. s.</i> 5 18 24.41	<i>° ' "</i> .....	3	...
660	31 Orionis.....	5 21 33.67	.....	2	...
665	$\delta$ Orionis.....	5 23 46.98	- 0 25 27.6	14	3
668	$\nu$ Orionis.....	5 24 8.83	.....	2	...
673	$\alpha$ Leporis.....	.....	- 17 56 33.5	...	5
676	$\phi^1$ Orionis.....	5 25 59.14	.....	3	...
686	$\epsilon$ Orionis.....	5 28 2.76	- 1 18 37.9	9	3
685	$\phi^2$ Orionis.....	5 28 3.92	.....	1	...
687	26 Aurigæ.....	5 28 17.94	.....	2	...
690	$\sigma$ Orionis.....	5 30 40.07	.....	3	...
...	* .....	5 31 55.45	+ 27 40 51.6	4	3
698	$\zeta$ Orionis.....	5 32 38.23	- 2 2 0.6	3	4
...	* .....	5 34 14.04	+ 27 39 2.3	4	3
710	52 Orionis.....	5 39 21.35	+ 6 23 27.8	1	2
711	$\zeta$ Leporis .....	5 39 39.85	.....	3	...
714	$\nu$ Aurigæ.....	5 40 20.14	.....	1	...
722	136 Tauri.....	5 43 12.59	+ 27 34 0.8	4	2
725	55 Orionis.....	5 43 35.85	.....	3	...
733	$\delta$ Aurigæ.....	5 46 16.55	.....	3	...
734	$\alpha$ Orionis.....	5 46 27.43	+ 7 22 14.4	14	7
735	$\beta$ Aurigæ.....	.....	+ 44 55 20.2	...	4
738	$\theta$ Aurigæ.....	5 48 44.67	+ 37 11 37.0	3	3
739	$\eta$ Leporis.....	.....	- 14 12 7.7	...	3
744	2 Monocerotis.....	5 51 25.87	.....	3	...
747	$\mu$ Orionis.....	5 53 31.70	.....	3	...
752	66 Orionis.....	5 56 28.16	.....	2	...
763	$\tau$ Leporis.....	6 0 41.47	- 19 9 4.5	1	1
761	Camelopardi .....	6 1 5.91	+ 69 21 48.0	...	3
770	1 Lyncis .....	6 3 3.93	.....	3	...
774	$\kappa$ Aurigæ .....	6 5 7.15	+ 29 33 0.2	5	4
776	2 Lyncis .....	6 5 24.95	.....	3	...
781	5 Monocerotis.....	6 7 0.29	.....	1	...
788	7 Monocerotis.....	6 11 57.69	.....	3	...
789	46 Aurigæ.....	.....	+ 49 21 40.1	...	3
790	$\mu$ Geminorum .....	6 13 13.19	+ 22 35 21.0	17	8
793	Monocerotis.....	6 14 49.78	.....	2	...
802	77 Orionis.....	6 18 57.92	.....	2	...
...	51 (Hevelii) Cephei.....	6 22	+ 87 15 47.2	...	13
...	..... S. P. ....	..... 53.26	..... 47.1	5	6
812	12 Monocerotis.....	6 23 46.71	.....	1	...
813	13 Monocerotis.....	.....	+ 7 26 39.8	...	3
816	Canis Majoris.....	.....	- 17 57 6.1	...	1
819	14 Monocerotis.....	6 26 3.33	.....	3	...
822	54 Aurigæ.....	.....	+ 28 23 53.6	...	1
823	$\rho^2$ Canis Majoris .....	6 29 39.94	.....	1	...
825	25 Geminorum .....	6 31 12.21	.....	1	...
828	26 Geminorum .....	.....	+ 17 47 47.3	...	1
831	$\epsilon$ Geminorum .....	6 34 1.40	+ 25 17 0.5	7	5
830	42 Camelopardi.....	6 34 8.10	.....	3	...
832	28 Geminorum.....	6 34 32.97	.....	1	...
836	$\xi^2$ Geminorum.....	.....	+ 13 3 48.7	...	1



No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
835	43 Camelopardi .....	<i>h. m. s.</i> .....	<i>° ' "</i> + 69 3 46.0	...	1
834	Camelopardi .....	.....	+ 77 9 55.1	...	3
837	16 Monocerotis .....	6 37 45.59	.....	3	...
838	$\alpha$ Canis Majoris .....	6 38 3.25	- 16 30 2.2	14	5
840	18 Monocerotis .....	6 39 28.00	.....	3	...
841	$\psi^2$ Canis Majoris .....	6 39 30.59	.....	1	...
842	33 Geminorum .....	.....	+ 16 22 46.2	...	1
844	36 Geminorum .....	6 41 53.63	.....	1	...
...	Groombridge 1119 .....	6 42 8.54	+ 89 3 3.0	5	4
...	..... S. P. ....	5.12	4.4	5	2
847	15 Lyncis .....	6 43 19.07	.....	3	...
854	$\theta$ Canis Majoris .....	6 46 42.77	.....	3	...
860	$\pi^3$ Canis Majoris .....	.....	- 19 56 9.8	...	3
863	$\iota$ Canis Majoris .....	6 48 57.54	.....	2	...
870	$\omega^1$ Geminorum .....	6 52 35.97	.....	1	...
873	19 Monocerotis .....	6 54 55.25	.....	3	...
878	$\gamma$ Canis Majoris .....	6 56 28.59	.....	2	...
874	Camelopardi .....	6 56 48.65	.....	1	...
880	63 Aurigæ .....	7 0 34.41	+ 39 34 32.2	3	3
881	$\tau$ Geminorum .....	7 0 53.06	+ 30 30 7.1	3	3
884	20 Monocerotis .....	7 2 13.92	- 3 59 28.4	3	3
887	22 Monocerotis .....	7 3 38.53	- 0 13 55.4	3	1
900	$\delta$ Geminorum .....	7 10 30.09	+ 22 16 19.3	13	5
902	65 Aurigæ .....	7 11 16.84	.....	2	...
911	$\iota$ Geminorum .....	7 15 43.26	+ 28 6 41.0	3	3
912	1 Canis Minoris .....	7 16 1.40	+ 11 58 42.8	3	3
913	$\epsilon$ Canis Minoris .....	7 16 50.72	+ 9 35 14.9	3	3
917	$\beta$ Canis Minoris .....	7 18 25.03	.....	3	...
920	$\eta$ Canis Minoris .....	7 19 22.49	.....	3	...
921	$\gamma$ Canis Minoris .....	7 19 23.58	.....	3	...
925	$\delta^1$ Canis Minoris .....	7 23 44.18	.....	3	...
927	$\alpha$ Geminorum preceding ..	7 24 18.61	.....	22	...
	$\alpha$ Geminorum following ..	7 24 19.04	+ 32 14 3.2	22	6
930	$\delta^2$ Canis Minoris .....	.....	+ 3 37 39.8	...	3
932	$\delta^3$ Canis Minoris .....	7 25 49.00	+ 3 42 54.9	3	3
933	$\nu$ Geminorum .....	7 25 59.57	.....	1	...
938	25 Monocerotis .....	7 29 16.45	- 3 45 25.3	3	3
941	$\alpha$ Canis Minoris .....	7 30 52.12	+ 5 37 55.5	32	14
944	26 Monocerotis .....	7 33 33.26	- 9 10 49.7	3	1
947	$\lambda$ Geminorum .....	7 34 43.20	+ 24 46 40.4	2	2
948	$\beta$ Geminorum .....	7 35 27.28	+ 28 24 31.5	33	11
953	$\pi$ Canis Minoris .....	7 37 24.23	+ 11 9 16.7	3	3
955	4 Argûs .....	7 38 32.04	- 14 10 38.8	3	3
959	6 Argûs .....	7 42 24.72	- 16 49 22.6	2	2
964	9 Argûs .....	7 44 18.84	.....	3	...
968	Canis Minoris .....	7 46 46.42	.....	3	...
973	14 Canis Minoris .....	7 49 59.70	+ 2 38 55.7	3	3
983	28 Monocerotis .....	7 53 1.70	- 0 57 3.2	1	3
984	6 Cancri .....	7 53 37.18	+ 28 14 22.4	4	2
985	13 Argûs .....	7 53 53.28	+ 2 46 15.5	3	1
988	55 Camelopardi .....	7 56 42.03	.....	1	...

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No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
994	29 Monocerotis.....	<sup>h.</sup> <sup>m.</sup> <sup>s.</sup> 8 0 29.86	° ' " - 2 31 11.3	3	3
996	16 Argus.....	.....	-18 46 39.6	...	3
1008	β Cancri.....	8 7 46.50	.....	2	...
...	Groombridge 1418.....	8 8 0.68	+85 36 2.1	5	5
1012	λ Cancri.....	8 10 57.22	+24 31 25.0	1	1
1018	22 Argus.....	8 15 12.49	-12 32 29.5	1	3
1021	1 Hydræ.....	8 16 33.19	- 3 14 2.8	2	1
1020	• Ursæ Majoris.....	.....	+61 14 55.5	...	3
1030	2 Hydræ.....	8 18 24.51	.....	3	...
1035	θ Cancri.....	8 22 24.28	+18 38 0.3	1	1
1041	Monocerotis.....	8 24 16.82	-19 2 14.1	3	3
1042	π² Ursæ Majoris.....	.....	+64 52 56.3	...	3
1044	{ Hydræ preceding.....	8 27 17.03	.....	4	...
	{ Hydræ following.....	8 27 17.32	.....	4	...
...	* 8 <sup>m</sup> R. A. 8 <sup>h</sup> 28 <sup>m</sup> 20 <sup>s</sup> .....	.....	+20 17 19.3	...	2
1046	δ Hydræ.....	8 29 7.55	.....	3	...
1047	σ Hydræ.....	8 30 20.20	.....	2	...
1057	6 Hydræ.....	8 32 23.82	.....	3	...
1060	γ Cancri.....	8 33 57.70	+22 2 34.0	2	2
1063	9 Hydræ.....	8 34 14.95	.....	2	...
1066	δ Cancri.....	8 35 31.58	+18 44 27.4	2	1
1069	ι Cancri.....	8 36 56.44	+29 20 31.3	2	3
1073	ι Hydræ.....	8 38 14.63	+ 7 0 16.8	8	3
1074	12 Hydræ.....	.....	-12 57 47.3	...	3
1075	Hydræ.....	.....	- 1 18 41.8	...	1
1076	ε Hydræ.....	8 39 54.00	.....	3	...
1079	14 Hydræ.....	8 41 16.11	.....	3	...
1083	ε² Cancri.....	8 42 59.48	.....	2	...
1087	ε⁴ Cancri.....	8 46 0.04	.....	1	...
1089	ζ Hydræ.....	8 46 52.52	.....	3	...
1092	ι Ursæ Majoris.....	.....	+48 40 6.9	...	3
1099	Ursæ Majoris.....	8 52 35.92	+47 47 16.2	3	3
1103	Lyncis.....	8 56 15.90	+39 5 26.2	3	3
1104	ω Hydræ.....	8 57 29.44	+ 5 43 52.2	3	1
1109	ξ Cancri.....	9 0 5.43	+22 41 31.7	5	3
1113	20 Hydræ.....	9 1 42.97	- 8 8 16.9	3	3
1116	π¹ Cancri.....	9 3 28.48	.....	1	...
1117	Cancri.....	9 4 24.75	+21 56 31.3	3	3
1119	21 Hydræ.....	9 4 28.83	.....	3	...
1118	18 Ursæ Majoris.....	.....	+54 40 52.6	...	2
1122	π² Cancri.....	9 6 19.93	.....	2	...
1126	23 Hydræ.....	9 8 41.77	.....	3	...
1130	83 Cancri.....	9 9 59.08	+18 23 0.5	2	2
1131	40 Lyncis.....	9 11 13.68	.....	3	...
1134	26 Hydræ.....	.....	-11 17 55.6	...	3
1136	27 Hydræ.....	9 12 37.12	- 8 52 34.6	3	3
1135	Draconis.....	.....	+82 1 38.7	...	3
1141	Leonis.....	9 15 40.93	.....	1	...
1147	α Hydræ.....	9 19 40.46	- 7 57 51.0	7	8
1151	τ¹ Hydræ.....	9 20 58.41	.....	3	...
1152	θ Ursæ Majoris.....	.....	+52 24 23.9	...	7



No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
1153	$\lambda$ Leonis .....	<i>h. m. s.</i> 9 22 31.27	<i>° ' "</i> + 23 40 25.4	4	2
1157	$\tau^2$ Hydræ .....	9 23 46.19	.....	3	...
1158	10 Leonis Minoris .....	.....	+ 37 6 29.2	...	3
1161	33 Hydræ .....	.....	- 5 11 59.0	...	3
1169	$\epsilon$ Hydræ .....	9 31 37.80	- 0 24 55.3	3	3
1171	$\phi$ Leonis .....	9 32 33.16	+ 10 37 16.5	4	2
1172	$\alpha$ Hydræ .....	9 32 35.08	.....	3	...
1174	$\psi$ Leonis .....	9 34 57.12	+ 14 45 17.1	1	1
1175	$\epsilon$ Leonis .....	9 36 41.97	+ 24 30 44.3	9	6
1179	$\nu$ Ursæ Majoris .....	.....	+ 59 47 29.2	...	3
1181	$\phi$ Ursæ Majoris .....	.....	+ 54 48 45.7	...	3
1184	22 Leonis .....	9 42 43.81	+ 25 9 12.4	3	3
1185	6 Sextantis .....	9 43 7.18	.....	3	...
1192	10 Sextantis .....	9 47 53.31	.....	1	...
1193	$\nu$ Leonis .....	9 49 33.22	+ 13 12 35.1	1	1
1195	Sextantis .....	9 51 21.74	.....	1	...
1199	Hydræ .....	9 54 44.77	- 12 31 24.7	3	3
1203	$\nu^2$ Hydræ .....	9 57 16.97	- 12 17 10.8	3	3
1204	21 Leonis Minoris .....	9 57 54.66	.....	3	...
1206	$\eta$ Leonis .....	9 58 32.55	+ 17 32 41.1	1	1
1209	$\alpha$ Leonis .....	9 59 47.43	+ 12 45 5.0	22	12
1211	17 Sextantis .....	.....	- 7 37 11.9	...	3
1212	$\lambda^2$ Hydræ .....	10 2 44.18	- 11 33 39.6	3	3
...	Groombridge 1620 .....	10 5 5.57	+ 85 3 45.9	5	5
1218	21 Sextantis .....	10 6 6.92	.....	3	...
1224	22 Sextantis .....	10 9 37.65	.....	3	...
1228	$\gamma$ Leonis preceding .....	10 11 5.03	+ 20 39 11.0	1	2
...	$\gamma$ Leonis following .....	10 11 5.20	.....	1	...
1231	23 Sextantis .....	10 12 42.70	.....	1	...
1230	$\mu$ Ursæ Majoris .....	10 12 42.82	+ 42 18 24.0	3	3
1236	30 Leonis Minoris .....	10 16 39.96	+ 34 36 48.7	3	3
1238	$\mu$ Hydræ .....	10 18 18.27	- 16 0 59.7	3	3
1245	Sextantis .....	10 20 34.32	.....	3	...
1254	$\delta$ Leonis .....	10 24 19.67	.....	3	...
1255	37 Ursæ Majoris .....	.....	+ 57 54 32.8	...	3
1260	1 Hydræ & Crateris .....	10 28 25.02	- 15 30 45.2	3	3
1261	37 Leonis Minoris .....	.....	+ 32 48 37.4	...	3
1265	$\phi^3$ Hydræ & Crateris .....	10 30 44.39	.....	3	...
1267	33 Sextantis .....	10 33 12.64	.....	1	...
1269	40 Leonis Minoris .....	10 34 10.75	.....	3	...
1274	42 Leonis Minoris .....	.....	+ 31 31 41.1	...	3
1282	3 Hydræ & Crateris .....	10 38 58.98	- 16 26 58.6	3	3
1284	53 Leonis .....	10 40 47.32	+ 11 23 43.1	3	1
1285	44 Leonis Minoris .....	10 41 1.93	.....	3	...
1287	$\nu$ Hydræ & Crateris .....	10 41 41.00	.....	3	...
1292	6 Hydræ & Crateris .....	10 45 37.13	.....	3	...
1295	55 Leonis .....	10 47 25.22	.....	1	...
1300	$\alpha$ Hydræ & Crateris .....	10 51 55.97	- 17 26 34.6	3	3
1301	$\beta$ Ursæ Majoris .....	.....	+ 57 14 38.2	...	2
1305	$\alpha$ Ursæ Majoris .....	.....	+ 62 37 7.1	...	13

No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
...	* 8 <sup>m</sup> R. A. 10 <sup>h</sup> 53 <sup>m</sup> 53 <sup>s</sup>	<i>h. m. s.</i> .....	<i>° ' "</i> .....	...	1
1310	χ Leonis .....	10 56 42.70	+ 9 44 2.3	2	3
1314	67 Leonis .....	11 0 10.28	+ 8 12 17.5	3	3
1315	↓ Ursæ Majoris .....	.....	+ 25 31 44.0	3	...
1320	δ Leonis .....	11 5 32.21	+ 45 22 14.9	30	12
1333	δ Hydræ & Crateris .....	11 11 17.71	+ 21 24 17.0	8	7
1334	σ Leonis .....	11 12 49.87	- 13 54 28.7	1	3
1337	λ Hydræ & Crateris .....	11 15 23.14	+ 6 54 38.1	3	...
1338	ι Leonis .....	.....	.....	...	2
1339	79 Leonis .....	11 15 46.54	+ 11 24 54.8	2	...
...	* 8 <sup>m</sup> R. A. 11 <sup>h</sup> 17 <sup>m</sup> 6 <sup>s</sup> ...	.....	+ 8 50 22.6	...	1
1346	κ Hydræ & Crateris .....	11 19 3.12	.....	3	...
1347	τ Leonis .....	11 19 39.53	+ 3 44 31.6	1	1
...	* 7 <sup>m</sup> R. A. 11 <sup>h</sup> 21 <sup>m</sup> 13 <sup>s</sup>	.....	+ 8 29 11.9	...	1
1351	86 Leonis .....	11 22 4.35	.....	3	...
1361	θ Hydræ & Crateris .....	11 28 30.91	.....	3	...
1362	υ Leonis .....	11 28 42.35	+ 0 3 52.6	1	1
...	* 7 <sup>m</sup> R. A. 11 <sup>h</sup> 29 <sup>m</sup> 2 <sup>s</sup> ...	.....	+ 7 9 36.6	...	1
1365	24 Hydræ & Crateris .....	11 30 29.56	.....	3	...
1367	Virginis .....	11 35 41.73	.....	1	...
1368	ζ Hydræ & Crateris .....	11 36 36.44	.....	3	...
1371	υ Virginis .....	.....	+ 7 25 51.9	...	3
1373	93 Leonis .....	11 39 40.40	.....	3	...
1375	β Leonis .....	11 40 50.56	+ 15 28 18.4	24	20
1376	β Virginis .....	11 42 18.59	+ 2 40 18.7	2	2
1379	γ Ursæ Majoris .....	.....	+ 54 35 23.9	...	8
1382	η Hydræ & Crateris .....	11 47 49.05	.....	3	...
1390	Virginis .....	11 55 31.21	.....	1	...
1391	2 Comæ Berenices .....	11 56 1.58	.....	1	...
...	Groombridge 1850 .....	11 56 27.71	+ 86 28 45.8	5	5
1392	ο Virginis .....	11 57 0.38	+ 9 37 37.2	2	2
1393	Virginis .....	11 57 45.46	.....	1	...
...	* 7 <sup>m</sup> R. A. 11 <sup>h</sup> 59 <sup>m</sup> 20 <sup>s</sup>	.....	+ 5 24 36.7	...	1
1397	10 Virginis .....	12 1 26.27	.....	1	...
1415	η Virginis .....	12 11 40.21	+ 0 13 41.3	5	2
1422	17 Virginis .....	12 14 20.69	.....	1	...
...	Groombridge 1884 .....	12 14 25.11	+ 88 35 31.7	5	5
1432	Virginis .....	12 19 36.26	.....	1	...
1434	Virginis .....	12 20 5.83	.....	1	...
1445	20 Virginis .....	12 24 53.81	.....	1	...
1446	21 Virginis .....	12 25 28.49	- 8 33 45.2	4	1
1465	γ Virginis .....	12 33 30.37	- 0 33 53.6	1	1
1488	↓ Virginis .....	12 45 59.16	- 8 39 47.2	3	3
1492	12 Canum Venaticorum .....	12 48 29.18	+ 39 11 21.3	31	7
1506	49 Virginis .....	12 59 28.06	.....	1	...
1511	θ Virginis .....	13 1 37.15	- 4 40 39.2	4	2
1533	α Virginis .....	13 16 43.12	- 10 19 7.2	11	8
1534	ζ Ursæ Majoris .....	.....	+ 55 46 4.8	...	11
...	Groombridge 2007 .....	13 21 27.52	+ 85 35 45.6	5	5
1550	ζ Virginis .....	13 26 29.43	.....	1	...



No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
1556	82 Virginis.....	<i>h. m. s.</i> 13 33 10.05	.....	2	...
1574	89 Virginis.....	13 41 8.00	.....	5	...
1575	$\eta$ Ursæ Majoris .....	.....	+ 50 7 8.9	...	17
1587	$\eta$ Bootis .....	13 47 1.10	+ 19 12 26.5	31	12
1614	Virginis.....	14 4 7.20	.....	1	...
1620	$\alpha$ Bootis.....	14 8 19.16	+ 20 1 24.8	37	14
1672	$\varepsilon$ Bootis.....	14 37 57.36	+ 27 45 22.5	16	7
1681	$\alpha^2$ Libræ.....	14 41 58.92	- 15 22 5.1	9	2
1700	$\beta$ Ursæ Minoris.....	.....	+ 74 48 49.0	...	14
1705	20 Libræ .....	14 54 39.46	.....	1	...
1721	$\iota^1$ Libræ.....	15 3 3.17	.....	1	...
1732	$\beta$ Libræ.....	15 8 21.08	- 8 47 2.7	6	3
1752	Libræ .....	.....	- 16 41 41.5	...	2
1770	$\alpha^*$ Coronæ borealis .....	15 27 52.35	+ 27 15 37.8	29	7
1776	$\tau^2$ Serpentis.....	.....	+ 16 39 23.9	...	1
1780	$\chi$ Libræ.....	15 30 46.29	.....	1	...
...	Groombridge 2283.....	15 32 32.51	+ 87 50 5.8	5	5
...	..... S. P.	33.78	6.4	2	1
1791	$\alpha$ Serpentis .....	15 36 20.49	+ 6 56 12.1	22	7
1800	1 Scorpïi .....	15 41 18.31	.....	2	...
1824	$\zeta$ Ursæ Minoris.....	.....	+ 78 17 11.6	...	6
1823	$\delta$ Scorpïi .....	15 50 49.31	.....	1	...
1836	$\beta^1$ Scorpïi.....	15 56 5.08	.....	2	...
1842	$\theta$ Draconis .....	.....	+ 58 59 49.2	...	2
1859	$\delta$ Ophiuchi.....	16 5 54.77	- 3 16 27.6	8	4
1872	$\sigma$ Scorpïi.....	16 11 24.53	.....	1	...
1885	$\alpha$ Scorpïi.....	16 19 32.68	- 26 4 3.3	6	1
1892	$\eta$ Draconis .....	.....	+ 61 52 48.5	...	9
...	* .....	16 42 39.72	+ 15 39 42.1	3	3
...	* .....	16 43 55.69	+ 16 4 25.0	3	3
1956	Ophiuchi .....	16 57 14.82	.....	1	...
1964	$\varepsilon$ Ursæ Minoris.....	.....	+ 82 17 27.4	...	7
1970	$\alpha$ Herculis.....	17 7 18.50	+ 14 34 45.0	16	5
...	* .....	17 11 29.74	+ 28 54 36.5	3	3
1986	$\theta$ Ophiuchi .....	17 12 7.55	.....	1	...
...	* .....	17 15 30.56	+ 32 1 25.5	3	3
...	* .....	17 16 3.14	+ 32 8 40.8	3	3
...	* .....	17 20 59.50	+ 34 50 5.2	3	3
...	* .....	17 23 43.07	+ 35 4 6.8	3	3
...	* .....	17 26 7.46	+ 34 56 31.4	3	3
2016	$\beta$ Draconis.....	.....	+ 52 25 23.9	...	5
2017	$\alpha$ Ophiuchi .....	17 27 27.79	+ 12 40 56.9	22	3
...	* .....	17 28 0.63	+ 34 39 19.8	3	3
...	* .....	17 28 59.47	+ 34 51 36.5	4	3
...	* .....	17 45 20.75	+ 41 14 48.6	3	3
...	* .....	17 50 4.21	+ 41 30 9.2	3	3
2071	$\gamma$ Draconis.....	.....	+ 51 30 37.6	...	11
2122	$\lambda$ Sagittarii .....	18 18 2.29	.....	1	...
2148	$\delta$ Ursæ Minoris .....	18 24 15.16	+ 86 35 27.9	40	18
...	..... S. P.....	14.78	27.3	36	19

No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
...	24 Ursæ Minoris.....	<i>h. m. s.</i> 18 30 16.90	<i>° ' "</i> +86 57 56.6	5	5
...	..... S. P. ....	17.02	.....	3	...
2156	$\alpha$ Lyrae.....	18 31 29.24	+38 38 16.1	25	16
2177	$\beta$ Lyrae.....	18 44 8.18	+33 10 48.3	50	5
2180	$\sigma$ Sagittarii.....	18 45 16.81	.....	2	...
2208	$\tau$ Sagittarii.....	18 56 52.91	.....	1	...
2214	$\zeta$ Aquilæ.....	18 58 0.60	+13 37 45.3	36	3
2253	$\delta$ Draconis.....	.....	+67 22 41.7	...	1
2266	$\delta$ Aquilæ.....	19 17 22.78	+ 2 47 56.8	24	1
2317	$\gamma$ Aquilæ.....	19 38 36.27	+10 13 32.2	30	2
2329	$\alpha$ Aquilæ.....	19 42 55.57	+ 8 26 53.2	34	9
2340	$\beta$ Aquilæ.....	19 47 24.24	.....	19	...
2388	$\alpha^2$ Capricorni.....	20 9 6.92	-13 2 18.7	2	3
2403	$\pi$ Capricorni.....	20 18 5.90	-18 44 3.7	1	1
2409	69 Aquilæ.....	20 21 14.01	.....	1	...
...	$\lambda$ Ursæ Minoris.....	.....	+88 49 33.9	...	12
...	..... S. P. ....	.....	33.0	...	5
2425	70 Aquilæ.....	20 28 20.52	.....	1	...
2433	1 Aquarii.....	20 31 9.73	.....	1	...
2439	$\alpha$ Delphini.....	.....	+15 20 53.4	...	1
2444	$\alpha$ Cygni.....	20 35 56.68	+44 42 28.6	24	14
2445	$\downarrow$ Capricorni.....	20 36 33.18	.....	1	...
2451	3 Aquarii.....	20 39 14.37	.....	1	...
2455	$\epsilon$ Cygni.....	.....	+33 22 14.7	...	1
2465	$\eta$ Cephei.....	.....	+61 12 54.0	...	2
...	Groombridge 3402 S. P.	20 45 18.38	+88 37 32.7	5	5
2512	$\zeta$ Cygni.....	21 6 5.21	+29 34 11.5	30	8
2516	29 Capricorni.....	21 6 49.58	.....	1	...
2536	$\alpha$ Cephei.....	.....	+61 54 18.9	...	10
2551	$\beta$ Aquarii.....	21 23 4.70	- 6 16 31.8	10	2
2559	$\beta$ Cephei.....	.....	+69 51 17.4	...	9
...	Groombridge 3548 S. P.	21 30 18.45	+86 21 30.1	5	5
2578	$\epsilon$ Pegasi.....	21 36 16.67	+ 9 8 23.4	14	4
2586	$\delta$ Capricorni.....	21 38 8.62	-16 51 15.1	2	4
2602	Aquarii.....	21 45 45.68	.....	1	...
2607	Aquarii.....	21 49 46.68	.....	1	...
2619	$\alpha$ Aquarii.....	21 57 30.78	- 1 5 57.0	13	8
2622	$\iota$ Aquarii.....	21 57 43.80	-14 38 51.7	2	2
2646	$\zeta$ Cephei.....	.....	+57 24 33.7	...	2
2655	$\theta$ Aquarii.....	22 8 20.00	- 8 34 55.2	2	2
2688	$\sigma$ Aquarii.....	22 22 7.28	-11 29 58.5	2	2
2690	58 Aquarii.....	22 23 8.79	-11 43 42.4	1	1
2710	$\zeta$ Pegasi.....	22 33 26.03	+ 9 59 33.2	21	3
2716	$\eta$ Pegasi.....	.....	+29 22 51.6	...	2
2727	$\mu$ Pegasi.....	.....	+23 45 10.6	...	1
2729	$\iota$ Cephei.....	.....	+65 21 17.9	...	2
2730	$\lambda$ Aquarii.....	22 44 12.59	- 8 26 4.1	1	1
2741	$\alpha$ Piscis Australis.....	.....	-30 28 21.9	...	3
2753	$\beta$ Pegasi.....	.....	+27 12 39.7	...	11
2755	$\alpha$ Pegasi.....	22 56 44.65	+14 20 26.1	23	4



No. of Astronom. Society's Catalogue.	STAR.	Mean Right Ascension.	Mean Declination.	No. of Observations.	
				Right Ascension.	Declina- tion.
2769	59 Pegasi.....	<i>h. m. s.</i> .....	<i>° ' "</i> + 7 50 49.2	...	1
2770	60 Pegasi.....	.....	+25 58 43.9	...	1
2772	φ Aquarii .....	23 5 58.90	- 6 54 55.0	5	2
2783	96 Aquarii .....	.....	- 6 0 10.7	...	1
2790	65 Pegasi.....	.....	+19 56 49.4	...	1
2798	α <sup>1</sup> Piscium .....	23 18 40.74	+ 0 22 31.2	2	2
...	Groombridge 4101 S.P.	23 27 45.74	+86 25 10.1	6	5
2823	ι Piscium.....	23 31 40.31	+ 4 45 15.3	9	4
2826	γ Cephei .....	.....	+76 44 3.0	...	7
2829	λ Piscium.....	23 33 49.85	+ 0 53 40.4	3	2
2834	78 Pegasi.....	.....	+28 28 11.8	...	1
2865	ω Piscium.....	23 51 2.88	+ 5 58 18.7	6	3
2869	29 Piscium.....	23 53 34.22	- 3 55 24.9	3	2





REDUCED OBSERVATIONS  
OF  
THE SUN, MOON, AND PLANETS.

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1839.

## OBSERVED SIDEREAL TIME OF THE SUN'S DIAMETER PASSING THE MERIDIAN.

Date.	Observed Time.	Difference from Nautical Almanac.	Date.	Observed Time.	Difference from Nautical Almanac.
1839,			1839,		
January	2	<sup>m.</sup> 21.85 <sup>s.</sup> -0.07	May	24	<sup>m.</sup> 15.39 <sup>s.</sup> -0.17
	8	21.28 +0.08		25	15.60 -0.10
	9	21.04 -0.02		27	15.86 -0.12
	14	20.14 -0.10		28	16.14 +0.02
	15	19.98 -0.08		29	16.28 +0.04
	16	19.76 -0.12		30	16.34 -0.02
	17	19.46 -0.22	June	1	16.50 -0.10
	23	18.32 -0.14		3	16.60 -0.20
	24	18.03 -0.21		4	16.90 0.00
	25	18.02 0.00		5	17.00 0.00
	26	17.90 +0.10		11	17.42 -0.06
	30	16.84 -0.06		13	17.44 -0.16
31	16.64 -0.02	14		17.64 0.00	
February	1	16.40 -0.04		15	17.70 +0.02
	2	16.20 -0.02		17	17.66 -0.08
	5	15.42 -0.10		18	17.64 -0.12
	6	15.18 -0.12		19	17.58 -0.18
	12	13.96 0.00		25	17.70 -0.04
	13	13.60 -0.14		28	17.62 0.00
	15	13.28 -0.02		29	17.60 +0.04
	18	12.66 -0.04	July	1	17.48 +0.04
	19	12.38 -0.12		3	17.54 +0.26
	20	12.12 -0.20		4	17.06 -0.14
	22	11.90 -0.04		5	17.04 -0.08
	23	11.74 -0.02		8	16.70 -0.12
	25	11.42 +0.02		9	16.66 -0.06
	26	11.16 -0.08		13	16.32 +0.08
	27	11.01 -0.07		15	16.02 +0.06
	March	1		10.96 +0.20	16
4		10.22 -0.12		20	15.18 -0.06
6		9.88 -0.20		22	14.84 -0.08
12		9.40 -0.02		26	13.94 -0.34
13		9.12 -0.22		29	13.71 -0.07
19		8.90 -0.06		30	13.22 -0.38
22		8.82 -0.02	August	1	13.18 -0.06
25		8.84 +0.06		2	13.09 +0.01
26		8.64 -0.14		7	12.08 -0.14
30		8.58 -0.22		20	10.36 +0.18
April	8	9.18 0.00		21	10.04 0.00
	10	9.24 -0.10		22	9.72 -0.18
	11	9.26 -0.16		26	9.21 -0.19
	12	9.38 -0.12		30	8.78 -0.18
	13	9.56 -0.02	September	3	8.46 -0.14
	20	10.18 -0.16		6	8.28 -0.10
	24	10.72 -0.16		9	8.00 -0.20
	27	11.16 -0.14		11	8.02 -0.10
May	1	11.57 -0.33		13	7.86 -0.20
	2	11.84 -0.20		19	7.87 -0.17
	7	12.86 +0.02		21	8.18 +0.10
	10	13.29 -0.03		23	7.98 -0.16
	11	13.40 -0.08		24	8.12 -0.06
	17	14.52 +0.04		25	8.18 -0.04
	20	14.82 -0.12	26	7.91 -0.35	



Date.	Observed Time.	Difference from Nautical Almanac.	Date.	Observed Time.	Difference from Nautical Almanac.
1839, October 2	m. s. 2 8.70	s. +0.02	1839, November 11	m. s. 2 15.96	s. -0.06
3	8.66	-0.10	12	16.08	-0.18
5	8.92	-0.04	19	17.70	-0.20
7	8.92	-0.26	20	17.88	-0.24
9	9.44	+0.02	23	18.68	-0.10
11	9.54	-0.16	27	19.62	+0.02
15	10.12	-0.20	December 6	20.80	-0.36
18	10.90	+0.08	7	21.18	-0.12
19	11.00	0.00	21	22.48	+0.08
25	12.12	-0.04	23	22.36	-0.06
28	12.60	-0.20	25	22.36	-0.02
30	13.24	0.00	26	22.38	+0.02
November 9	15.23	-0.31	28	22.36	+0.08
Mean Difference from Nautical Almanac by 132 observations = - 0 <sup>s</sup> .08.					

## VERTICAL DIAMETER OF THE SUN OBSERVED WITH THE MURAL CIRCLE.

Date.	Observed Diameter.	Difference from Nautical Almanac.	Date.	Observed Diameter.	Difference from Nautical Almanac.
1839, January 2	' " 32 36.9	" +2.3	1839, June 1	' " 31 34.8	" +0.4
8	32 37.6	+3.4	5	31 33.8	+0.4
March 19	32 8.4	-0.6	11	31 29.4	-2.6
26	32 1.8	-3.4	14	31 31.9	+0.3
30	32 0.7	-2.3	15	31 32.4	+1.0
April 8	31 57.8	-0.2	17	31 34.7	+3.5
11	31 55.3	-1.1	18	31 30.7	-0.3
12	31 53.8	-2.0	19	31 29.4	-1.6
13	31 55.9	+0.7	July 1	31 32.2	+2.0
20	31 49.8	-1.8	3	31 32.4	+2.2
24	31 51.0	+1.4	4	31 29.9	-0.3
27	31 48.4	+0.2	5	31 32.7	+2.5
May 2	31 45.3	-0.5	8	31 29.1	-1.1
11	31 42.3	+0.7	26	31 35.3	+2.7
27	31 37.8	+1.8	30	31 31.5	-2.1
28	31 35.9	+0.3	August 1	31 31.1	-2.9
29	31 37.3	+1.9	September 13	31 49.9	-1.3
Mean Difference from Nautical Almanac by 34 observations = + 0 <sup>''</sup> .11.					

Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
Jan. 2	I. & II.	18 49 59.74	+0.02	N. & S.	+8.5	-22 57 53.1	-0.2
8	I. & II.	19 16 20.92	+0.04	N. & S.	8.5	-22 18 2.8	+5.6
9	I. & II.	19 20 42.99	+0.17	N.	8.5	-22 9 58.0	-0.5
12	II.	19 33 45.46	+0.07	S.	8.5	-21 42 51.3	-1.9
14	I. & II.	19 42 24.20	+0.07	N.	8.5	-21 22 37.6	-0.8
15	I. & II.	19 46 42.68	+0.15	S.	8.5	-21 11 53.6	-0.2
16	I. & II.	19 51 0.23	-0.02	N.	8.5	-21 0 46.9	-1.4
17	I. & II.	19 55 17.35	+0.09	S.	8.5	-20 49 12.5	+1.1
19	II.	20 3 49.27	+0.17	.....	...	.....	.....
21	I.	20 12 18.23	+0.32	.....	...	.....	.....
23	I. & II.	20 20 43.93	+0.34	N.	8.4	-19 31 55.3	+0.6
24	I. & II.	20 24 55.48	+0.25	.....	...	.....	.....
25	I. & II.	20 29 5.97	-0.07	S.	8.4	-19 3 13.1	+0.4
26	I. & II.	20 33 16.32	+0.28	N.	8.4	-18 48 20.5	+0.5
30	I. & II.	20 49 48.02	+0.21	S.	8.3	-17 45 29.5	+1.0
31	I. & II.	20 53 53.93	+0.24	.....	...	.....	.....
Feb. 1	I. & II.	20 57 58.86	+0.11	.....	...	.....	.....
2	I. & II.	21 2 3.08	+0.09	.....	...	.....	.....
5	I. & II.	21 14 11.17	+0.30	N.	8.2	-16 1 58.1	-3.0
6	I. & II.	21 18 12.08	+0.19	S.	8.2	-15 43 38.8	0.0
7	I.	21 22 12.23	+0.10	N.	8.2	-15 25 8.8	-2.6
12	I. & II.	21 42 1.73	+0.13	.....	...	.....	.....
13	I. & II.	21 45 57.42	+0.25	.....	...	.....	.....
14	II.	21 49 52.05	+0.06	.....	...	.....	.....
15	I. & II.	21 53 46.24	+0.19	S.	8.1	-12 47 53.6	+0.3
18	I. & II.	22 5 24.00	+0.17	N.	8.0	-11 45 22.0	-0.5
19	I. & II.	22 9 14.99	-0.01	S.	8.0	-11 24 7.4	+0.7
20	I. & II.	22 13 5.62	+0.16	.....	...	.....	.....
22	I. & II.	22 20 44.48	+0.13	N.	7.9	-10 19 24.3	+1.8
23	I. & II.	22 24 32.94	+0.14	S.	7.9	-9 57 31.2	+1.7
25	I. & II.	22 32 7.93	+0.09	N.	7.8	-9 13 21.9	-1.6
26	I. & II.	22 35 54.42	-0.02	S.	7.8	-8 51 0.5	+1.1
27	I. & II.	22 39 40.52	+0.07	N.	7.8	-8 28 35.4	-0.3
Mar. 1	I. & II.	22 47 10.85	+0.02	S.	7.7	-7 43 18.8	+1.6
4	I. & II.	22 58 22.85	+0.23	N.	7.6	-6 34 39.7	-0.4
6	I. & II.	23 5 48.34	+0.14	.....	...	.....	.....
12	I. & II.	23 27 56.02	+0.18	S.	7.4	-3 27 50.6	+1.5
13	I. & II.	23 31 36.06	+0.09	N.	7.3	-3 4 15.5	+0.4
19	I. & II.	23 53 31.77	+0.27	N. & S.	7.2	-0 42 7.4	+1.3
22	I. & II.	0 4 26.97	+0.26	S.	7.1	+0 28 59.3	+2.7
25	I. & II.	0 15 21.14	+0.27	S.	7.0	+1 39 50.5	+1.0
26	I. & II.	0 18 59.02	+0.24	N. & S.	6.9	+2 3 22.3	-0.4
29	I.	0 29 52.79	+0.36	.....	...	.....	.....
30	I. & II.	0 33 30.65	+0.29	N. & S.	6.8	+3 37 6.0	+1.7
April 8	I. & II.	1 6 17.38	+0.11	N. & S.	6.4	+7 3 25.8	+0.8
10	I. & II.	1 13 36.69	+0.09	.....	...	.....	.....
11	I. & II.	1 17 16.71	+0.04	N. & S.	6.3	+8 10 16.1	-1.3
12	I. & II.	1 20 57.07	+0.05	N. & S.	6.3	+8 32 20.1	+1.1
13	.....	.....	.....	N. & S.	6.2	+8 54 9.8	-2.3
20	I. & II.	1 50 32.07	+0.13	N. & S.	6.0	+11 22 56.6	+0.5
24	I. & II.	2 5 28.85	+0.17	N. & S.	5.8	+12 43 55.0	+0.8
27	I. & II.	2 16 45.72	-0.22	N. & S.	5.7	+13 42 26.9	+0.3
May 1	I. & II.	2 31 56.04	+0.03	S.	5.6	+14 57 20.6	+0.7
2	I. & II.	2 35 45.03	+0.16	N. & S.	5.5	+15 15 28.1	+0.8
7	I. & II.	2 54 57.87	+0.19	.....	...	.....	.....
10	I. & II.	3 6 36.38	+0.03	.....	...	.....	.....



Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
May 11	I. & II.	3 10 30.57	+0.15	N. & S.	+5.2	+17 46 42.8	-0.6
17	I. & II.	3 34 7.20	+0.15	S.	5.1	+19 14 28.7	+1.3
20	I. & II.	3 46 2.72	-0.19	N.	4.9	+19 53 56.9	-1.9
24	I. & II.	4 2 4.86	+0.14	S.	4.9	+20 41 54.1	-0.3
25	I. & II.	4 6 6.65	+0.19	N.	4.8	+20 52 57.5	-3.1
27	I. & II.	4 14 11.55	+0.14	N. & S.	4.8	+21 14 8.3	0.0
28	I. & II.	4 18 14.71	+0.10	N. & S.	4.8	+21 24 9.8	+0.4
29	I. & II.	4 22 18.32	+0.04	N. & S.	4.7	+21 33 46.7	-1.7
30	I. & II.	4 26 22.32	-0.10	N.	4.7	+21 43 5.7	+0.6
June 1	I. & II.	4 34 32.12	+0.08	N. & S.	4.7	+22 0 30.8	-0.1
3	I. & II.	4 42 43.51	+0.15	.....	...	.....	.....
4	I. & II.	4 46 49.64	+0.03	.....	...	.....	.....
5	I. & II.	4 50 56.33	+0.07	N. & S.	4.6	+22 30 44.6	-1.9
8	.....	.....	.....	S.	4.6	+22 49 22.3	+1.1
11	I. & II.	5 15 43.15	+0.12	N. & S.	4.6	+23 4 18.0	-1.5
13	I. & II.	5 24 0.80	+0.12	N.	4.5	+23 12 18.0	+1.2
14	I. & II.	5 28 9.87	+0.10	N. & S.	4.5	+23 15 37.3	-1.4
15	I. & II.	5 32 19.06	+0.05	N. & S.	4.5	+23 18 35.7	-0.2
17	I. & II.	5 40 37.82	+0.03	N. & S.	4.5	+23 23 14.7	-1.5
18	I. & II.	5 44 47.41	+0.12	N. & S.	4.5	+23 24 56.9	-2.3
19	I. & II.	5 48 56.95	+0.11	N. & S.	4.5	+23 26 14.3	-3.1
20	II.	5 53 6.26	-0.14	.....	...	.....	.....
25	I. & II.	6 13 53.88	+0.18	S.	4.5	+23 25 23.9	-2.0
28	I. & II.	6 26 21.10	+0.15	.....	...	.....	.....
29	I. & II.	6 30 30.03	+0.31	.....	...	.....	.....
July 1	I. & II.	6 38 46.79	+0.11	N. & S.	4.5	+23 9 46.3	-0.5
3	I. & II.	6 47 2.49	-0.26	N. & S.	4.6	+23 1 17.4	-1.0
4	I. & II.	6 51 10.48	+0.07	N. & S.	4.6	+22 56 26.0	-2.0
5	I. & II.	6 55 17.80	+0.04	N. & S.	4.6	+22 51 12.4	-1.0
8	I. & II.	7 7 38.10	+0.13	N. & S.	4.6	+22 33 5.8	-1.1
9	I. & II.	7 11 44.07	+0.07	N.	4.6	+22 26 15.6	-1.9
13	I. & II.	7 28 4.11	+0.12	S.	4.7	+21 55 6.8	-2.1
15	I. & II.	7 36 11.30	+0.10	.....	...	.....	.....
16	I. & II.	7 40 14.11	+0.07	.....	...	.....	.....
20	I. & II.	7 56 20.27	+0.20	.....	...	.....	.....
22	I. & II.	8 4 19.84	+0.13	.....	...	.....	.....
25	II.	8 16 14.57	-0.25	N.	4.9	+19 46 37.3	+0.3
26	I. & II.	8 20 11.90	-0.12	N. & S.	5.0	+19 33 39.0	-1.5
29	I. & II.	8 32 0.04	0.00	N.	5.0	+18 52 54.3	-0.9
30	I. & II.	8 35 54.91	+0.04	N. & S.	5.1	+18 38 39.3	-3.0
Aug. 1	I. & II.	8 43 43.04	+0.28	N. & S.	5.1	+18 9 19.9	-1.5
2	I. & II.	8 47 36.20	+0.37	.....	...	.....	.....
5	II.	8 55 11.79	+0.23	.....	...	.....	.....
7	I. & II.	9 6 52.60	+0.15	.....	...	.....	.....
8	I.	9 10 42.13	+0.11	.....	...	.....	.....
10	I.	9 18 19.73	+0.32	.....	...	.....	.....
13	I.	9 29 41.39	+0.23	.....	...	.....	.....
20	I. & II.	9 55 52.53	+0.01	.....	...	.....	.....
21	I. & II.	9 59 35.05	+0.13	.....	...	.....	.....
22	I. & II.	10 3 16.79	-0.05	.....	...	.....	.....
26	I. & II.	10 18 0.24	+0.18	.....	...	.....	.....
30	I. & II.	10 32 37.07	+0.08	.....	...	.....	.....
Sept. 3	I. & II.	10 47 8.93	+0.11	.....	...	.....	.....
6	I. & II.	10 58 0.04	+0.10	.....	...	.....	.....
9	I. & II.	11 8 49.29	+0.12	.....	...	.....	.....
10	II.	11 12 25.37	+0.15	.....	...	.....	.....

Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
Sept. 11	I. & II.	11 16 1-27	+0-14	.....	...	.....	.....
12	II.	11 19 37-14	+0-24	.....	...	.....	.....
13	I. & II.	11 23 12-61	+0-06	N. & S.	+6-7	+ 3 58 4-9	-2-1
19	I. & II.	11 44 45-20	+0-07	N.	6-9	+ 1 39 7-5	-2-7
21	I. & II.	11 51 55-88	-0-06	N.	7-0	+ 0 52 29-6	-1-3
23	I. & II.	11 59 6-98	-0-04	S.	7-1	+ 0 5 43-9	-1-6
24	I. & II.	12 2 42-51	-0-22	N.	7-1	- 0 17 39-9	-1-2
25	I. & II.	12 6 18-48	-0-09	.....	...	.....	.....
26	I. & II.	12 9 54-66	+0-07	S.	7-2	- 1 4 29-1	-0-6
30	I.	12 24 21-01	+0-20	.....	...	.....	.....
Oct. 2	I. & II.	12 31 35-42	-0-08	S.	7-4	- 3 24 46-0	+0-4
3	I. & II.	12 35 13-16	-0-16	N.	7-4	- 3 48 5-8	-1-8
5	I. & II.	12 42 29-94	-0-01	S.	7-5	- 4 34 32-5	-1-2
7	I. & II.	12 49 48-06	-0-03	N.	7-5	- 5 20 45-3	0-0
9	I. & II.	12 57 7-90	+0-06	S.	7-6	- 6 6 41-7	+1-4
10	I.	13 0 48-38	+0-02	N.	7-6	- 6 29 34-8	+0-1
11	I. & II.	13 4 29-05	-0-30	S.	7-6	- 6 52 21-2	+0-2
15	I. & II.	13 19 18-30	+0-15	N.	7-7	- 8 22 26-7	+0-7
17	I.	13 26 45-77	+0-08	.....	...	.....	.....
18	I. & II.	13 30 30-28	-0-04	S.	7-8	- 9 28 47-5	0-0
19	I. & II.	13 34 15-48	-0-05	N.	7-8	- 9 50 38-3	-0-2
21	I.	13 41 47-54	-0-26	.....	...	.....	.....
25	I. & II.	13 57 0-27	-0-06	S.	8-0	-11 58 26-3	+0-4
28	I. & II.	14 8 32-40	+0-12	N.	8-0	-13 0 0-6	-1-6
30	I. & II.	14 16 17-29	-0-10	S.	8-1	-13 40 1-0	-0-3
Nov. 9	I. & II.	14 55 52-06	+0-14	N.	8-2	-16 46 8-1	-0-5
11	I. & II.	15 3 56-53	-0-31	S.	8-3	-17 20 9-4	-0-8
12	I. & II.	15 8 0-41	-0-15	N.	8-3	-17 36 46-5	-4-2
15	I.	15 20 16-83	+0-14	.....	...	.....	.....
19	I. & II.	15 36 49-57	-0-19	.....	...	.....	.....
20	I. & II.	15 41 0-12	+0-03	S.	8-4	-19 37 37-7	+0-2
23	I. & II.	15 53 35-90	-0-03	N.	8-4	-20 17 15-8	+0-6
27	I. & II.	16 10 34-74	-0-04	S.	8-5	-21 4 52-4	+0-6
Dec. 6	I. & II.	16 49 29-06	+0-20	N.	8-5	-22 28 23-5	-3-1
7	I. & II.	16 53 51-14	-0-09	S.	8-5	-22 35 27-7	+0-7
19	II.	17 46 49-68	+0-06	.....	...	.....	.....
21	I. & II.	17 55 42-55	+0-01	N.	8-5	-23 27 30-2	+0-1
23	I. & II.	18 4 35-71	+0-01	S.	8-6	-23 27 30-6	-1-8
25	I. & II.	18 13 28-87	+0-02	N.	8-5	-23 25 33-4	+0-4
26	I. & II.	18 17 55-36	0-00	S.	8-6	-23 23 51-8	+2-1
28	I. & II.	18 26 48-04	-0-03	N.	8-5	-23 19 8-2	+1-3



Date.	RIGHT ASCENSION.			DECLINATION.				
	Limb observed.	Right Ascension of Centre.	Difference from Naut. Almanac.	Limb observed.	Parallax in Declination.	Semidiameter.	Declination of Centre.	Difference from Naut. Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>' "</i>	<i>' "</i>	<i>° ' "</i>	<i>"</i>
Jan. 7	I. (a)	13 16 25.76	+0.21	S.	+49 52.8	+14 48.4	-10 17 44.5	+ 1.0
	II.	13 16 25.72	+0.17	.....	.....	.....	.....	.....
8	I. (a)	14 1 43.70	+0.21	S.	51 48.9	+14 51.9	-15 34 34.6	- 0.2
	II.	14 1 43.66	+0.17	.....	.....	.....	.....	.....
19	I.	23 31 10.29	-0.79	.....	.....	.....	.....	.....
20	I.	0 23 7.36	-0.50	S.	47 34.6	+16 13.4	+ 3 29 30.3	- 6.0
21	I.	1 15 34.82	-0.15	S.	42 50.8	+16 10.6	+10 19 31.7	- 7.6
24	I.	4 7 33.43	-0.40	S.	29 46.0	+15 55.7	+25 47 28.8	- 1.3
26	I.	6 14 27.11	-0.33	N.	26 26.8	-15 41.4	+28 29 43.2	- 2.7
27	I.	7 16 44.10	-0.09	N.	27 26.8	-15 33.1	+27 6 23.1	- 2.8
28	I.	8 15 32.25	-0.13	N.	29 44.9	-15 24.5	+24 7 54.5	- 1.7
29	II.	9 9 59.61	-0.12	N.	32 54.4	-15 15.7	+19 55 28.2	+ 0.4
30	II.	10 0 14.53	-0.20	.....	.....	.....	.....	.....
Feb. 6	II.	15 18 38.01	+0.17	S.	53 50.6	+14 58.0	-22 51 16.4	- 1.9
18	I.	1 51 25.67	-0.78	S.	39 50.7	+16 18.3	+14 45 45.2	-10.1
19	I.	2 48 48.29	-0.71	S.	34 49.1	+16 9.7	+20 30 49.7	- 8.7
22	I.	5 54 45.40	-0.91	S.	26 41.4	+15 39.7	+28 41 45.0	- 0.7
	.....	.....	.....	N.	26 13.2	-15 39.7	+28 41 43.6	- 2.1
23	I.	6 56 52.88	-0.80	N.	26 42.2	-15 30.2	+27 51 1.4	- 0.4
24	I.	7 55 57.89	-0.47	N.	28 35.4	-15 21.4	+25 22 49.4	+ 1.9
25	I.	8 51 1.15	-0.35	N.	31 28.6	-15 13.2	+21 35 32.0	+ 0.5
26	I.	9 42 0.58	-0.16	N.	34 55.8	-15 5.7	+16 49 54.5	+ 0.3
27	I.	10 29 32.52	-0.22	N.	38 33.6	-14 59.0	+11 25 19.3	+ 2.3
28	II.	11 14 33.30	-0.47	S.	42 21.3	+14 53.4	+ 5 38 26.6	+ 1.1
Mar. 1	II.	11 58 6.41	-0.55	.....	.....	.....	.....	.....
21	I.	5 34 26.79	-0.52	S.	27 4.7	+15 51.1	+28 37 50.6	- 3.9
22	I.	6 38 1.08	-0.59	N.	26 29.0	-15 37.5	+28 20 3.3	- 2.8
23	I.	7 38 24.81	-0.74	N.	27 54.2	-15 25.3	+26 19 6.2	0.0
24	I.	8 34 32.37	-0.56	N.	30 27.2	-15 14.7	+22 54 11.7	+ 1.4
25	I.	9 26 18.77	-0.48	N.	33 42.1	-15 5.7	+18 26 28.7	+ 2.5
29	I.	12 26 19.37	+0.06	S.	47 7.7	+14 45.2	- 4 6 42.0	+ 0.9
	II.	12 26 19.22	-0.09	.....	.....	.....	.....	.....
30	II.	13 9 46.34	-0.05	S.	49 26.1	+14 43.8	- 9 48 44.4	+ 2.1
April 18	I.	6 13 47.36	-0.16	S.	27 17.4	+15 56.7	+28 34 41.5	- 1.9
19	I.	7 17 18.94	-0.18	.....	.....	.....	.....	.....
21	I.	9 9 58.13	-0.75	N.	32 51.4	-15 13.5	+19 53 7.5	+ 0.9
24	I.	11 29 20.19	-0.20	N.	43 4.0	-14 49.3	+ 3 36 21.5	+ 4.9
26	I.	12 55 23.42	-0.34	N.	48 31.3	-14 43.7	- 7 58 46.3	+ 1.1
27	I.	13 39 41.81	+0.05	N.	50 30.7	-14 43.4	-13 25 46.9	+ 2.1
	.....	.....	.....	S.	50 40.3	+14 43.4	-13 25 49.6	- 0.6
May 6	II.	21 48 49.92	-0.62	N.	55 23.7	-15 54.2	-15 54 59.0	- 9.0
19	.....	.....	.....	N.	35 29.7	-15 15.7	+16 36 8.0	- 2.0
21	I.	11 14 12.25	-0.24	N.	42 16.7	-14 55.5	+ 5 25 57.0	+ 3.9
22	I.	11 57 33.68	-0.20	.....	.....	.....	.....	.....
23	I.	12 40 33.99	-0.37	N.	47 5.30	-14 46.0	- 6 10 54.3	+ 5.2
24	I.	13 24 23.41	+0.04	.....	.....	.....	.....	.....
25	I.	14 10 4.29	+0.11	.....	.....	.....	.....	.....
27	I.	15 50 15.06	+0.34	N.	53 45.9	-14 52.7	-24 54 30.3	- 2.3
	.....	.....	.....	S.	53 50.1	+14 52.7	-24 54 30.2	- 2.2
June 4	II.	23 14 51.98	-0.76	.....	.....	.....	.....	.....
15	I.	9 18 49.63	-0.97	.....	.....	.....	.....	.....

(a) Dark or unenlightened Limb.

Date.	RIGHT ASCENSION.			DECLINATION.				
	Limb observed.	Right Ascension of Centre.	Difference from Naut. Almanac.	Limb observed.	Parallax in Declination.	Semidiameter.	Declination of Centre.	Difference from Naut. Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>' "</i>	<i>' "</i>	<i>° ' "</i>	<i>"</i>
June 16	I.	10 9 26.67	-0.70	N.	+38 4.0	-15 17.7	+13 14 46.3	- 0.3
17	I.	10 56 17.57	-0.57	N.	41 29.4	-15 6.2	+ 7 29 23.1	- 1.9
19	I.	12 24 9.45	-0.35	N.	47 17.1	-14 51.0	- 4 16 7.3	+ 0.8
20	I.	13 7 46.19	-0.37	.....	.....	.....	.....	.....
July 4	II.	1 34 11.36	-0.51	.....	.....	.....	.....	.....
15	I.	11 21 44.36	-0.78	N.	43 42.5	-15 5.9	+ 3 53 15.6	+ 0.6
21	.....	.....	.....	N.	54 9.5	-14 57.2	-25 48 4.9	- 2.2
Aug. 2	II.	3 11 42.20	-0.88	.....	.....	.....	.....	.....
3	II.	4 14 17.49	-0.66	.....	.....	.....	.....	.....
18	I.	16 34 10.29	-0.02	.....	.....	.....	.....	.....
20	I.	18 30 31.71	+0.10	.....	.....	.....	.....	.....
26	II.	0 5 45.75	-0.63	.....	.....	.....	.....	.....
Sept. 1	II.	6 5 1.54	-1.08	.....	.....	.....	.....	.....
2	II.	7 8 41.24	-1.11	.....	.....	.....	.....	.....
13	I.	15 19 27.94	-0.19	.....	.....	.....	.....	.....
19	.....	.....	.....	S.	56 19.8	+15 47.7	-20 20 39.4	- 0.5
20	I.	21 53 9.01	+0.08	S.	55 44.3	+16 3.1	-14 49 32.3	- 0.6
21	I.	22 47 2.63	+0.12	S.	54 3.4	+16 16.9	- 8 19 23.6	+ 1.7
22	I.	23 40 29.11	-0.06	N.	50 46.6	-16 27.7	- 1 12 5.4	- 2.7
.....	.....	.....	.....	S.	51 5.4	+16 27.7	- 1 12 3.5	- 0.8
23	II.	0 34 38.09	-0.63	N.	46 31.0	-16 34.4	+ 6 6 55.0	- 5.9
29	II.	6 49 46.67	-1.34	S.	27 53.0	+15 51.1	+27 44 33.3	+ 2.5
Oct. 17	I.	21 26 38.39	-0.05	S.	55 26.7	+15 44.4	-17 32 20.1	- 7.5
18	I.	22 19 44.15	-0.03	S.	54 30.5	+16 0.9	-11 39 0.0	- 5.8
19	I.	23 12 21.10	+0.19	S.	52 28.9	+16 16.9	- 4 56 33.0	- 5.0
20	I.	0 5 37.01	+0.24	S.	49 12.2	+16 30.5	+ 2 14 51.0	- 5.1
29	II.	9 23 49.00	-0.87	S.	35 25.4	+15 26.2	+17 44 20.7	+ 7.1
Nov. 16	I.	23 38 50.52	-0.54	S.	50 9.3	+16 10.0	- 1 11 32.5	-11.3
17	I.	0 31 24.41	-0.50	S.	46 36.5	+16 24.6	+ 5 50 12.2	- 9.0
19	I.	2 27 2.30	-0.54	S.	37 20.5	+16 43.7	+19 2 29.5	- 8.7
.....	.....	.....	.....	N.	36 51.3	-16 43.7	+19 2 32.3	- 5.9
21	II.	4 41 33.65	-0.76	N.	29 17.4	-16 41.4	+27 17 41.3	- 4.9
Dec. 13	I.	23 18 58.19	-0.06	.....	.....	.....	.....	.....
15	I.	1 0 58.11	-0.72	.....	.....	.....	.....	.....
20	.....	.....	.....	N.	28 25.8	-16 30.1	+27 51 18.1	- 2.1
21	II.	7 32 37.25	-0.94	S.	30 43.3	+16 19.2	+25 33 46.9	+ 1.3
.....	.....	.....	.....	N.	30 13.9	-16 19.2	+25 33 45.0	- 0.6
26	II.	11 56 10.38	-0.09	.....	.....	.....	.....	.....
27	I. (a)	12 40 38.72	-0.18	S.	49 14.3	+14 57.1	- 7 25 21.9	+ 3.3
.....	II.	12 40 38.54	-0.36	.....	.....	.....	.....	.....
28	I. (a)	13 25 28.17	-0.23	S.	50 53.9	+14 50.3	-12 54 21.9	+ 1.3
.....	II.	13 25 28.19	-0.21	.....	.....	.....	.....	.....

(a) Dark or unenlightened Limb.



Date.	RIGHT ASCENSION.			DECLINATION.		
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>° ' "</i>	<i>"</i>
Mar. 19	I.	0 16 31.66	-0.02	+5.4	+ 1 0 12.9	-3.9
23	I.	0 44 57.47	-0.14	5.3	+ 4 48 26.9	-3.4
30	I.	1 31 37.65	+0.09	5.5	+11 2 22.7	-4.0
April 8	I.	2 15 43.40	+0.17	6.3	+16 32 53.2	+0.1
10	I.	2 21 52.33	+0.44	6.5	+17 14 6.1	-2.4
May 19	...	.....	.....	8.3	+ 9 46 24.8	+5.1
22	II.	2 22 49.29	+0.29	7.7	+10 29 10.4	+3.0
23	...	.....	.....	7.6	+10 46 56.1	+1.9
26	II.	2 37 36.05	+0.43	...	.....	.....
27	II.	2 41 48.08	+0.20	...	.....	.....
28	...	.....	.....	6.6	+12 38 6.3	+4.7
29	II.	2 50 48.53	+0.07	6.4	+13 4 6.3	+3.2
31	II.	3 0 37.19	+0.03	6.0	+13 59 13.8	+4.1
June 7	II.	3 41 25.82	+0.05	4.9	+17 33 36.8	+0.2
12	II.	4 17 7.07	-0.24	4.2	+20 10 47.2	-1.5
13	II.	4 24 56.41	-0.15	4.1	+20 40 43.3	-2.0
14	II.	4 32 59.09	-0.25	4.0	+21 9 46.0	-1.4
16	II.	4 49 43.98	-0.32	3.8	+22 4 14.4	-4.8
17	II.	4 58 25.42	-0.17	3.7	+22 29 20.2	-4.4
18	II.	5 7 18.06	-0.35	...	.....	.....
July 1	...	.....	.....	3.4	+24 22 6.4	-1.2
3	I.	7 19 25.77	-0.56	3.4	+23 59 2.1	-1.6
4	I.	7 28 25.79	-0.46	3.5	+23 43 50.5	-1.9
5	I.	7 37 15.79	-0.62	3.5	+23 26 24.4	-0.8
8	I.	8 2 43.04	-0.50	3.7	+22 21 52.0	-0.6
13	I.	8 41 23.54	-0.42	4.1	+20 2 1.9	-0.1
26	...	.....	.....	5.6	+12 24 34.6	+2.5
30	I.	10 19 39.87	-0.09	6.2	+ 9 58 50.1	+3.6
Aug. 8	I.	10 52 5.72	+0.11	...	.....	.....
Sept. 12	II.	10 22 25.79	+0.07	7.7	+ 9 29 56.4	-5.2
20	II.	10 49 26.61	-0.23	6.1	+ 8 50 55.8	-2.7
22	II.	11 0 9.54	-0.38	5.9	+ 8 2 41.1	-2.3
24	II.	11 11 48.64	-0.46	5.7	+ 7 2 22.5	-1.7
25	II.	11 17 53.67	-0.41	5.6	+ 6 28 23.9	-0.5
29	II.	11 43 13.42	-0.40	...	.....	.....
Oct. 1	II.	11 56 10.18	-0.39	5.4	+ 2 27 24.6	+0.6
4	II.	12 15 36.46	-0.43	5.3	+ 0 13 15.8	+1.7
28	I.	14 38 30.58	+0.24	5.7	-16 0 10.5	+4.3
Nov. 20	I.	17 0 25.90	+0.10	7.0	-25 11 9.8	+0.7
Dec. 27	II.	17 9 16.19	+0.93	...	.....	.....

Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
Jan. 9	I.	19 43 49.05	+0.15	.....	+4.9	-22 22 31.0	+1.2
12	I.	19 59 53.27	+0.11	.....	.....	.....	.....
16	I.	20 21 4.09	+0.11	.....	4.9	-20 46 1.6	+1.0
19	I.	20 36 44.98	+0.18	.....	.....	.....	.....
26	I.	21 12 35.88	+0.08	.....	4.9	-17 37 3.9	+0.2
Feb. 2	I.	21 47 23.55	-0.03	.....	.....	.....	.....
5	I.	22 2 0.03	+0.27	.....	.....	.....	.....
13	I.	22 40 7.39	+0.07	.....	.....	.....	.....
15	I.	22 49 29.22	+0.01	.....	4.7	-9 3 27.8	-1.8
18	I.	23 3 25.66	+0.07	.....	4.7	-7 35 43.9	-3.9
19	I.	23 8 2.72	-0.09	.....	4.7	-7 6 3.3	-3.3
23	I.	23 26 24.59	-0.11	.....	.....	.....	.....
25	I.	23 35 31.94	-0.09	.....	4.6	-4 4 38.4	-3.6
27	I.	23 44 37.20	-0.17	.....	4.5	-3 3 10.0	-3.6
Mar. 2	I.	23 58 12.46	-0.01	.....	.....	.....	.....
4	I.	0 7 14.33	-0.08	.....	4.5	-0 28 13.3	-3.1
6	I.	0 16 15.50	-0.13	.....	.....	.....	.....
9	I.	0 29 46.81	-0.08	.....	.....	.....	.....
19	...	.....	.....	.....	4.1	+7 13 57.5	-5.0
22	I.	1 28 40.04	+0.05	N. & S.	4.1	+8 43 21.1	-6.4
23	I.	1 33 14.47	-0.04	N. & S.	4.1	+9 12 48.4	-4.5
25	I.	1 42 25.20	-0.08	N. & S.	4.0	+10 10 59.0	-5.7
26	...	.....	.....	.....	4.0	+10 39 43.4	-6.2
27	I.	1 51 38.67	+0.05	.....	.....	.....	.....
30	I.	2 5 33.91	-0.12	N. & S.	3.9	+12 32 6.6	-6.0
April 8	I.	2 48 6.20	-0.32	N. & S.	3.7	+16 26 23.5	-3.4
10	I.	2 57 44.19	-0.17	N. & S.	3.7	+17 14 14.1	-5.6
11	I.	3 2 34.65	-0.17	.....	3.6	+17 37 33.3	-4.3
12	I.	3 7 26.05	-0.27	N. & S.	3.7	+18 0 24.3	-4.5
13	...	.....	.....	N. & S.	3.6	+18 22 47.5	-4.9
18	I.	3 36 57.09	-0.12	N. & S.	3.5	+20 7 30.3	-3.7
20	...	.....	.....	N. & S.	3.5	+20 45 44.9	-5.1
23	I.	4 2 0.56	-0.23	N. & S.	3.5	+21 39 1.2	-3.5
24	I.	4 7 4.22	-0.13	N. & S.	3.4	+21 55 37.2	-3.7
27	...	.....	.....	.....	3.4	+22 41 50.1	-3.9
May 7	I.	5 14 0.19	-0.26	.....	.....	.....	.....
10	I.	5 29 39.72	-0.30	N. & S.	3.4	+24 55 19.4	-1.7
11	I.	5 34 53.42	-0.25	N. & S.	3.4	+25 0 49.6	-2.0
22	...	.....	.....	N. & S.	3.6	+25 14 50.1	-0.2
25	I.	6 47 47.23	-0.16	.....	.....	.....	.....
27	I.	6 58 3.34	+0.05	.....	.....	.....	.....
28	I.	7 3 9.70	-0.10	.....	.....	.....	.....
29	I.	7 8 15.23	-0.20	.....	3.8	+24 39 40.1	+1.8
30	I.	7 13 19.83	-0.12	.....	3.9	+24 31 57.9	+3.7
31	I.	7 18 23.32	-0.02	.....	3.9	+24 23 33.1	+2.4
June 1	I.	7 23 25.54	-0.02	.....	.....	.....	.....
3	I.	7 33 26.45	+0.11	.....	4.1	+23 54 30.9	+3.2
5	I.	7 43 21.82	-0.10	.....	4.2	+23 31 58.6	+2.3
11	I.	8 12 34.02	-0.10	.....	4.5	+22 10 3.8	+3.9
13	I.	8 22 5.64	-0.04	.....	4.6	+21 38 13.6	+4.0

A correction of 0".1 applied to observations of North L. from March 22 to April 24, for defect of illumination.



Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
June 14	I.	8 26 48.98	+0.01	.....	+4.7	+21 21 28.3	+ 1.9
15	I.	8 31 30.53	-0.01	.....	.....	.....	.....
17	I.	8 40 48.44	-0.05	.....	.....	.....	.....
18	I.	8 45 24.93	+0.13	.....	4.8	+20 9 34.3	+ 4.6
19	I.	8 49 59.37	+0.03	.....	5.0	+19 50 21.4	+ 3.4
July 3	I.	9 50 48.63	+0.03	.....	.....	.....	.....
4	I.	9 54 55.37	+0.08	.....	6.4	+14 14 14.4	+ 5.5
8	I.	10 11 3.83	+0.12	N. & S.	6.9	+12 32 21.5	+ 5.7
10	I.	10 18 57.26	+0.34	N.	7.2	+11 39 58.0	+ 5.0
13	I.	10 30 33.37	+0.34	S.	7.6	+10 19 50.0	+ 2.8
15	I.	10 38 8.13	+0.25	N.	7.8	+ 9 25 36.0	+ 5.1
27	I.	11 20 59.03	+0.36	.....	.....	.....	.....
29	I.	11 27 40.18	+0.34	N.	10.0	+ 2 54 49.6	+ 4.4
30	I.	11 30 57.65	+0.28	N. & S.	10.2	+ 2 26 39.2	+ 2.1
Aug. 1	I.	11 37 26.51	+0.29	N.	10.6	+ 1 30 32.4	+ 5.3
5	I.	11 49 58.50	+0.33	.....	.....	.....	.....
21	I.	12 33 12.12	+0.34	.....	.....	.....	.....
26	I.	12 43 43.45	+0.37	.....	.....	.....	.....
27	I.	12 45 36.38	+0.27	.....	.....	.....	.....
Sept. 3	I.	12 56 22.91	+0.35	.....	.....	.....	.....
13	...	.....	.....	N.	23.1	-14 17 32.3	- 9.2
18	I.	13 1 0.37	+0.56	.....	.....	.....	.....
21	I.	12 58 18.18	+0.45	N.	26.0	-14 51 53.7	-11.5
23	I.	12 55 50.03	+0.35	N.	26.6	-14 47 3.7	-14.8
25	I.	12 52 52.45	+0.14	.....	.....	.....	.....
26	...	.....	.....	N.	27.5	-14 28 46.0	-17.5
Oct. 4	II.	12 33 21.14	+0.72	N.	28.6	-12 18 47.4	-24.1
9	II.	12 23 17.78	+0.64	N.	28.0	-10 31 21.6	-23.9
10	II.	12 21 28.41	+0.36	N.	27.9	-10 8 30.9	-24.0
15	II.	12 13 57.48	+0.71	S.	26.6	- 8 14 34.2	-25.0
16	II.	12 12 49.49	+0.62	N. & S.	26.2	- 7 52 40.0	-24.2
17	II.	12 11 49.66	+0.37	N. & S.	25.9	- 7 31 23.2	-27.3
18	II.	12 10 58.63	+0.35	N. & S.	25.5	- 7 10 40.7	-25.5
20	II.	12 9 43.09	+0.41	S.	24.8	- 6 31 38.3	-27.4
24	II.	12 8 59.90	+0.36	.....	.....	.....	.....

Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
Feb. 27	I. & II.	11 49 59.15	-0.07	N.	+9.6	+5 24 42.6	-2.3
28	I. & II.	11 48 45.72	-0.13	S.	9.6	+5 32 44.8	-4.2
Mar. 1	I. & II.	11 47 30.40	-0.12	.....	...	.....	.....
2	I. & II.	11 46 13.38	+0.08	S.	9.6	+5 49 15.1	-2.0
5	I. & II.	11 42 11.23	-0.36	N.	9.6	+6 14 35.2	-0.5
6	I. & II.	11 40 47.96	-0.16	S.	9.7	+6 23 4.1	-3.6
9	I. & II.	11 36 31.02	+0.10	.....	...	.....	.....
12	I. & II.	11 32 6.92	-0.01	S.	9.6	+7 14 6.6	-3.8
18	I. & II.	11 23 16.74	+0.07	S.	9.5	+8 2 2.9	-3.1
21	I. & II.	11 18 59.70	-0.01	N. & S.	9.5	+8 23 44.7	-0.6
23	I. & II.	11 16 14.34	-0.02	N. & S.	9.4	+8 37 5.0	+0.5
25	I. & II.	11 13 35.06	-0.05	N. & S.	9.3	+8 49 23.7	0.0
29	I. & II.	11 8 38.92	+0.08	N. & S.	9.1	+9 10 48.5	+1.6
April 8	I. & II.	10 59 3.21	+0.10	N. & S.	8.6	+9 43 26.4	+0.4
9	I. & II.	10 58 20.58	+0.22	.....	...	.....	.....
10	I. & II.	10 57 40.66	+0.18	.....	8.4	+9 46 14.8	-0.3
13	.....	.....	.....	.....	8.3	+9 48 9.9	+0.5
17	I. & II.	10 54 23.94	+0.33	N. & S.	8.0	+9 46 27.7	+1.8
18	I. & II.	10 54 7.64	+0.34	.....	...	.....	.....
19	I. & II.	10 53 54.21	+0.31	.....	...	.....	.....
20	I. & II.	10 53 43.84	+0.43	.....	...	.....	.....
24	I. & II.	10 53 30.24	+0.41	.....	...	.....	.....
26	I. & II.	10 53 39.80	+0.19	.....	7.5	+9 25 56.4	+2.9
29	I. & II.	10 54 14.33	+0.26	.....	...	.....	.....
May 1	I. & II.	10 54 49.78	-0.06	.....	...	.....	.....
2	I. & II.	10 55 11.72	+0.30	.....	7.2	+9 0 42.6	+0.2
6	I. & II.	10 57 1.74	+0.22	.....	7.0	+8 39 25.6	+3.4
7	I. & II.	10 57 35.15	+0.36	.....	7.0	+8 33 32.2	+1.9
9	I. & II.	10 58 48.27	+0.30	.....	6.9	+8 21 10.7	+1.4
11	I. & II.	11 0 10.07	+0.30	.....	...	.....	.....
13	I. & II.	11 1 40.05	+0.19	.....	6.7	+7 54 3.8	0.0
16	I. & II.	11 4 10.08	+0.21	.....	...	.....	.....
20	I. & II.	11 7 56.14	+0.20	.....	...	.....	.....
21	I. & II.	11 8 57.56	+0.72	.....	...	.....	.....
22	I. & II.	11 9 59.98	+0.79	.....	...	.....	.....
23	I. & II.	11 11 3.95	+0.34	.....	...	.....	.....
24	I. & II.	11 12 9.80	+0.41	.....	...	.....	.....
25	I. & II.	11 13 17.17	+0.43	.....	...	.....	.....
27	I. & II.	11 15 36.46	+0.48	.....	...	.....	.....
28	I. & II.	11 16 48.20	+0.41	.....	...	.....	.....
29	I. & II.	11 18 1.30	+0.28	.....	...	.....	.....
30	I.	11 19 15.94	+0.28	.....	...	.....	.....
June 1	I. & II.	11 21 49.34	+0.33	.....	...	.....	.....
5	I.	11 27 11.67	+0.39	.....	...	.....	.....
7	I.	11 30 0.20	+0.34	.....	...	.....	.....
8	I.	11 31 26.29	+0.33	.....	...	.....	.....
14	I.	11 40 26.71	+0.35	.....	...	.....	.....
15	I.	11 42 0.59	+0.38	.....	...	.....	.....
17	I.	11 45 11.32	+0.34	.....	...	.....	.....
19	I.	11 48 25.94	+0.25	.....	5.7	+1 46 22.0	+3.3
20	I.	11 50 4.84	+0.36	.....	...	.....	.....

From April 8 correction for defect of illumination applied to observations of R. A.



## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF MARS.

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Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839, July 3	I.	<i>h. m. s.</i> 12 12 48.69	<i>s.</i> +0.23	.....	...	.....	.....
4	I.	12 14 39.56	+0.42	.....	...	.....	.....
8	I.	12 22 10.09	+0.39	.....	...	.....	.....
27	I.	13 0 31.64	+0.36	.....	...	.....	.....
Aug. 8	I.	13 26 54.63	+0.24	.....	...	.....	.....

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF VESTA.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839, Jan. 2	<i>h. m. s.</i> 6 27 17.08	<i>s.</i> -0.14	" +3.0	<i>° ' "</i> +22 19 32.5	" +19.8
5	6 23 57.50	+0.04	3.0	+22 30 12.8	+19.8
7	6 21 46.60	-0.15	...	.....	.....
8	6 20 42.08	-0.30	3.0	+22 40 38.2	+21.6
11	6 17 34.10	-0.12	2.9	+22 50 41.1	+19.6
14	6 14 34.81	-0.29	2.9	+23 0 23.7	+18.1
15	6 13 37.52	-0.20	2.9	+23 3 35.9	+20.2
16	6 12 41.26	-0.37	...	.....	.....
17	.....	.....	2.9	+23 9 47.5	+19.2
19	6 10 1.43	-0.27	...	.....	.....
21	6 8 22.29	-0.30	2.8	+23 21 43.1	+18.5
22	6 7 35.23	-0.20	...	.....	.....
23	6 6 49.65	-0.29	2.8	+23 27 26.5	+18.5
26	6 4 43.52	-0.30	...	.....	.....
28	6 3 28.33	-0.30	2.7	+23 41 3.1	+16.6
29	6 2 53.50	.....	2.7	+23 43 40.4	.....
30	6 2 20.51	.....	...	.....	.....
Feb. 6	5 59 23.71	.....	2.6	+24 3 22.5	.....
11	5 58 16.47	.....	...	.....	.....
12	5 58 9.01	.....	...	.....	.....
14	5 58 0.07	.....	...	.....	.....
16	5 57 58.83	.....	...	.....	.....
18	5 58 5.62	.....	...	.....	.....
22	.....	.....	2.3	+24 37 11.3	.....
23	5 58 44.98	.....	2.3	+24 39 3.9	.....
25	5 59 26.46	.....	2.3	+24 42 44.3	.....
27	6 0 9.12	.....	2.2	+24 46 18.7	.....
Mar. 2	6 1 22.79	.....	...	.....	.....
9	6 5 12.63	.....	...	.....	.....
12	6 7 14.70	.....	...	.....	.....

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF JUNO.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839,	<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>° ' "</i>	<i>"</i>
Sept. 23	1 35 51.03	-1.58	+6.2	+0 33 3.3	-17.7
28	1 33 53.84	-1.73	6.4	-0 34 14.0	-18.2
Oct. 2	1 31 57.41	-1.70	6.5	-1 29 21.9	-15.5
4	1 30 52.62	-1.75	6.7	-1 57 6.3	-16.0
5	1 30 18.72	-1.86	6.7	-2 10 58.4	-17.1
8	1 28 32.54	-1.95	6.8	-2 52 12.4	-13.8
10	1 27 18.74	-1.79	6.9	-3 19 24.3	-16.9
12	1 26 2.80	-1.92	6.9	-3 46 4.4	-15.2
15	1 24 6.98	-1.96	6.9	-4 24 58.5	-13.7
17	1 22 49.16	-2.14	7.0	-4 50 0.9	-13.9
19	1 21 31.74	-2.29	7.0	-5 14 10.2	-12.4
Nov. 16	1 9 23.01	.....	6.6	-8 40 41.3	.....
17	1 9 17.38	.....	6.5	-8 42 50.9	.....
19	1 9 11.45	.....	6.5	-8 46 2.6	.....
25	1 9 36.50	.....	...	.....	.....
Dec. 24	1 26 14.22	.....	...	.....	.....
27	1 29 10.96	.....	...	.....	.....
28	1 30 12.45	.....	...	.....	.....

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF PALLAS.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839,	<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>° ' "</i>	<i>"</i>
Mar. 18	13 20 58.20	-22.60	+4.2	+ 9 48 14.4	+ 4.6
21	13 19 10.30	-22.67	4.2	+10 53 43.7	+ 3.8
25	13 16 33.39	-22.93	4.1	+12 19 14.8	+ 4.8
27	13 15 10.65	-22.88	...	.....	.....
29	13 13 45.38	-23.01	3.9	+13 41 37.1	.....
April 8	13 6 21.74	-23.04	3.6	+16 47 43.9	+ 3.7
9	13 5 37.38	-22.92	...	.....	+ 1.3
10	13 4 53.15	-22.92	3.5	+17 20 45.1	+ 0.6
17	12 59 56.38	-22.19	...	.....	.....
18	12 59 16.40	-22.13	3.2	+19 16 34.0	- 2.3
19	12 58 37.21	-22.06	...	.....	.....
20	12 57 58.95	-21.89	...	.....	.....
30	12 52 30.28	-21.05	2.9	+21 19 9.5	-12.2
May 2	12 51 38.77	.....	2.9	+21 33 48.1	.....
6	12 50 9.89	.....	2.7	+21 58 19.2	.....
7	12 49 51.17	.....	...	.....	.....
9	.....	.....	2.7	+22 12 45.0	.....
10	12 49 2.82	.....	...	.....	.....
11	12 48 49.25	.....	2.6	+22 20 34.8	.....
13	12 48 26.62	.....	2.6	+22 26 59.6	.....
16	12 48 3.22	.....	2.5	+22 34 9.4	.....



Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839, May 22	<i>h. m. s.</i> 12 47 54.86	<i>s.</i> .....	<i>"</i> .....	<i>° ' "</i> .....	<i>"</i> .....
23	12 47 58.26	.....	.....	.....	.....
24	12 48 3.13	.....	.....	.....	.....
25	12 48 9.27	.....	.....	.....	.....

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF CERES.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839, Mar. 21	<i>h. m. s.</i> 13 36 20.58	<i>s.</i> +1.34	<i>"</i> +3.9	<i>° ' "</i> +6 44 0.8	<i>"</i> -20.1
25	13 33 29.25	+1.32	3.9	+7 3 40.3	-19.9
29	13 30 23.29	+1.38	3.9	+7 22 7.5	-19.9
30	13 29 34.94	+1.46	4.0	+7 26 30.7	-19.1
April 9	13 21 3.93	+1.30	...	.....	.....
15	13 15 51.07	+1.25	...	.....	.....
17	13 14 9.32	+1.73	...	.....	.....
18	13 13 18.73	+1.59	3.8	+8 22 14.2	-20.7
19	13 12 28.71	+1.47	...	.....	.....
20	13 11 39.57	+1.65	3.8	+8 24 18.4	-22.1
26	13 6 58.61	+1.53	3.7	+8 25 40.2	-21.3
27	13 6 14.67	+1.43	3.7	+8 25 11.2	-20.4
29	13 4 49.89	+1.42	...	.....	.....
30	13 4 9.05	+1.44	3.7	+8 22 24.9	-22.8
May 2	13 2 51.06	+1.91	3.7	+8 19 35.3	-21.6
6	13 0 27.82	+1.67	3.6	+8 11 29.6	-20.7
7	12 59 55.23	.....	...	.....	.....
9	12 58 53.81	.....	3.5	+8 3 19.2	.....
10	12 58 25.14	.....	...	.....	.....
11	12 57 57.66	.....	3.5	+7 56 56.1	.....
13	12 57 6.91	.....	3.6	+7 49 46.8	.....
16	12 56 1.28	.....	3.5	+7 37 42.5	.....
22	12 54 29.25	.....	...	.....	.....
23	12 54 18.73	.....	3.4	+7 3 39.6	.....
24	12 54 10.10	.....	...	.....	.....
25	12 54 2.56	.....	...	.....	.....

Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839, Jan. 7	I. & II.	<i>h. m. s.</i> 13 7 22.20	<i>s.</i> +0.51	.....	...	.....	.....
Mar. 18	I. & II.	13 0 50.64	+0.64	S.	+1.7	-4 46 36.5	-1.4
21	I. & II.	12 59 32.16	+0.56	N. & S.	1.6	-4 38 11.8	-3.2
25	I. & II.	12 57 44.00	+0.54	N. & S.	1.6	-4 26 36.6	-1.5
27	I. & II.	12 56 48.82	+0.66	.....	...	.....	.....
29	I. & II.	12 55 52.79	+0.54	N. & S.	1.6	-4 14 48.7	-1.4
30	I. & II.	12 55 24.83	+0.72	.....	1.6	-4 11 51.1	-1.9
April 8	I. & II.	12 51 9.38	+0.51	N. & S.	1.6	-3 45 9.4	-2.4
10	I. & II.	12 50 12.99	+0.48	S.	1.6	-3 39 14.6	+2.3
17	I. & II.	12 47 0.87	+0.81	N. & S.	1.6	-3 19 32.6	-1.1
18	I. & II.	12 46 34.08	+0.62	N. & S.	1.6	-3 16 50.3	-1.2
19	I. & II.	12 46 7.76	+0.64	.....	...	.....	.....
20	I. & II.	12 45 41.74	+0.67	.....	...	.....	.....
24	I. & II.	12 44 0.99	+0.88	N. & S.	1.6	-3 1 23.4	-1.7
26	I. & II.	12 43 12.24	+0.44	.....	1.6	-2 56 33.3	-0.6
29	I. & II.	12 42 2.80	+0.45	.....	...	.....	.....
30	I. & II.	12 41 40.52	+0.45	.....	1.6	-2 47 30.0	-0.9
May 2	I. & II.	12 40 57.75	+0.87	N. & S.	1.6	-2 43 16.8	-0.9
6	I. & II.	12 39 36.80	+0.51	N. & S.	1.6	-2 35 30.3	-0.6
7	I. & II.	12 39 18.04	+0.63	.....	...	.....	.....
9	I. & II.	12 38 41.88	+0.62	N. & S.	1.6	-2 30 19.4	-2.5
10	I. & II.	12 38 24.60	+0.59	.....	...	.....	.....
11	I. & II.	12 38 7.73	+0.40	N. & S.	1.5	-2 27 9.2	-1.9
13	I. & II.	12 37 36.16	+0.46	N.	1.5	-2 24 14.1	-0.9
16	I. & II.	12 36 53.28	+0.54	N. & S.	1.5	-2 20 22.9	-0.8
17	.....	.....	.....	.....	1.5	-2 19 12.4	+0.8
20	I. & II.	12 36 4.38	+0.34	.....	1.5	-2 16 11.6	-0.2
22	I. & II.	12 35 44.20	+0.74	.....	...	.....	.....
23	I. & II.	12 35 34.74	+0.60	.....	...	.....	.....
24	I. & II.	12 35 26.12	+0.67	.....	...	.....	.....
25	I. & II.	12 35 17.57	+0.17	.....	...	.....	.....
28	I. & II.	12 34 57.82	+0.65	.....	...	.....	.....
30	I. & II.	12 34 47.42	+0.47	.....	...	.....	.....
31	I. & II.	12 34 43.25	+0.43	.....	1.5	-2 10 30.0	+0.2
June 1	I. & II.	12 34 39.82	+0.48	.....	1.5	-2 10 25.1	-0.2
3	I. & II.	12 34 34.89	+0.56	.....	...	.....	.....
5	I. & II.	12 34 32.46	+0.48	.....	...	.....	.....
8	I. & II.	12 34 33.92	+0.57	.....	...	.....	.....
14	I. & II.	12 34 54.34	+0.44	.....	...	.....	.....
15	I. & II.	12 35 0.08	+0.48	.....	...	.....	.....
17	I. & II.	12 35 13.44	+0.51	.....	...	.....	.....
19	I. & II.	12 35 29.22	+0.40	.....	1.4	-2 20 52.8	-1.7
July 3	I. & II.	12 38 28.80	+0.26	.....	...	.....	.....
4	I. & II.	12 38 46.12	+0.36	.....	...	.....	.....



Date.	RIGHT ASCENSION.			DECLINATION.			
	Limb observed.	Right Ascension of Centre.	Difference from Nautical Almanac.	Limb observed.	Parallax in Declination.	Declination of Centre.	Difference from Nautical Almanac.
1839,		<i>h. m. s.</i>	<i>s.</i>		<i>"</i>	<i>° ' "</i>	<i>"</i>
May 13	I. & II.	16 26 52.52	+0.70	.....	+1.0	-19 44 1.3	+17.4
14	I. & II.	16 26 34.76	+0.55	.....	1.0	-19 43 20.2	+19.0
16	I. & II.	16 25 59.28	+0.65	.....	1.0	-19 42 3.0	+16.5
22	I. & II.	16 24 9.91	+0.46	.....	1.0	-19 38 2.9	+14.9
24	I. & II.	16 23 33.10	+0.59	.....	...	.....	.....
27	I. & II.	16 22 37.19	+0.35	.....	1.0	-19 34 38.4	+16.9
June 5	I. & II.	16 19 50.79	+0.59	.....	...	.....	.....
7	I. & II.	16 19 14.10	+0.40	.....	...	.....	.....
8	I. & II.	16 18 56.14	+0.56	.....	1.0	-19 26 46.3	+15.9
12	I. & II.	16 17 44.66	+0.46	.....	0.9	-19 24 15.9	+17.5
13	I. & II.	16 17 27.04	+0.37	.....	0.9	-19 23 38.8	+18.4
14	I. & II.	16 17 9.68	+0.39	.....	0.9	-19 23 5.6	+15.9
15	I. & II.	16 16 52.62	+0.56	.....	0.9	-19 22 28.9	+17.5
19	I. & II.	16 15 45.20	+0.36	.....	0.9	-19 20 12.7	+18.2
29	I. & II.	16 13 11.94	+0.48	.....	0.9	-19 15 17.4	+18.2
July 1	I. & II.	16 12 44.19	+0.46	.....	0.9	-19 14 28.3	+16.8
2	I. & II.	16 12 30.76	+0.49	.....	...	.....	.....
3	I. & II.	16 12 17.56	+0.47	.....	0.9	-19 13 40.9	+16.9
4	I. & II.	16 12 4.86	+0.67	.....	...	.....	.....
8	I. & II.	16 11 16.18	+0.49	.....	0.9	-19 11 58.1	+16.6
12	I. & II.	16 10 32.83	+0.63	.....	...	.....	.....
20	I. & II.	16 9 22.26	+0.48	.....	...	.....	.....
21	I. & II.	16 9 15.22	+0.60	.....	...	.....	.....
24	I. & II.	16 8 55.76	+0.41	.....	0.9	-19 9 10.6	+16.3

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF URANUS.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839,	<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>° ' "</i>	<i>"</i>
Jan. 2	22 45 0.84	-4.40	+0.4	-8 45 15.9	-16.9
Aug. 24	23 5 55.48	-5.30	...	.....	.....
27	23 5 29.89	-5.11	...	.....	.....
Sept. 2	23 4 37.00	-5.41	...	.....	.....
3	23 4 28.36	-5.20	...	.....	.....
4	23 4 19.56	-5.13	...	.....	.....
5	23 4 10.45	-5.36	...	.....	.....
7	23 3 52.73	-5.28	...	.....	.....
9	23 3 34.99	-5.21	...	.....	.....
10	23 3 25.96	-5.35	...	.....	.....
11	23 3 17.49	-4.93	...	.....	.....
13	23 2 59.58	-5.12	0.4	-6 58 48.4	-21.5
17	23 2 24.43	-5.14	0.4	-7 2 24.4	-20.5
18	23 2 16.04	-4.83	0.4	-7 3 18.4	-20.8

## OBSERVED RIGHT ASCENSIONS AND DECLINATIONS OF URANUS.

Date.	RIGHT ASCENSION.		DECLINATION.		
	Right Ascension.	Difference from Nautical Almanac.	Parallax in Declination.	Declination.	Difference from Nautical Almanac.
1839,	<i>h. m. s.</i>	<i>s.</i>	<i>"</i>	<i>" ' "</i>	<i>"</i>
Sept. 21	23 1 49.84	-5.17	0.4	-7 5 56.3	-20.0
22	23 1 41.25	-5.24	0.4	-7 6 48.4	-19.9
23	23 1 32.85	-5.17	...	.....	.....
25	23 1 16.38	-4.87	...	.....	.....
26	23 1 7.97	-5.00	...	.....	.....
30	23 0 35.24	-5.30	...	.....	.....
Oct. 2	23 0 19.64	-5.17	0.4	-7 15 5.1	-19.8
4	23 0 4.32	-5.10	0.4	-7 16 38.7	-20.4
5	22 59 56.67	-5.19	0.4	-7 17 24.5	-20.7
10	22 59 20.46	-5.17	0.4	-7 21 2.1	-21.3
12	22 59 6.87	-5.05	0.4	-7 22 21.8	-19.5
15	22 58 47.17	-5.13	0.4	-7 24 17.5	-19.0
17	22 58 34.68	-5.18	...	.....	.....
19	22 58 22.77	-5.19	0.4	-7 26 40.8	-19.0
20	22 58 17.31	-4.89	...	.....	.....
29	22 57 31.75	-5.37	0.4	-7 31 34.3	-19.4
Nov. 5	22 57 5.97	-5.04	0.4	-7 33 58.2	-18.3
12	22 56 48.68	-4.80	...	.....	.....
16	22 56 42.59	-4.87	...	.....	.....
Dec. 25	22 58 21.42	-4.99	...	.....	.....
27	22 58 34.03	-4.90	0.4	-7 22 42.1	-17.6
28	22 58 40.31	-5.12	0.4	-7 22 3.0	-21.0
31	22 59 1.13	-4.82	0.4	-7 19 45.0	-16.9



OBSERVATIONS  
OF  
THE COMET OF JANUARY 1840,  
LUNAR OCCULTATIONS OF STARS,  
AND  
ECLIPSES OF JUPITER'S SATELLITES.

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1839.

## OBSERVATIONS OF THE COMET OF JANUARY 1840.

THESE Observations were made with the Annular Micrometer, applied to the Equatorial Telescope, having a magnifying power of 50. Both the Outer and Inner Rings of the Micrometer were employed. The radius of the former is  $13' 26''$  of space; of the latter  $9' 41''$ . The times of observation were given by an Assistant Clock, shewing approximate Sidereal Times, and duly compared with the Transit Clock.

Date.	OBJECT.	North or South of Centre.	OUTER RING.	INNER RING.	INNER RING.	OUTER RING.	Concluded Transit over Hourly Circle.	COMET'S	
			Ingress.	Ingress.	Egress.	Egress.		R. A.	Declination.
1839, Dec. 28	Comet....	N.	m. s.	m. s.	m. s.	m. s.	h. m. s.	m. s.	" "
	*.....	S.	15 49	16 14	16 45	17 9	12 16 29.2	.....	.....
			18 23	18 44	19 30	19 50	12 19 6.8	-2 37.6	+16 41
	Comet....	N.	27 20	27 43	28 24.5	28 47	12 28 3.6	.....	.....
	*.....	S.	29 56	30 20	30 55	31 18.5	12 30 37.4	-2 33.8	+16 51
	Comet....	N.	32 37	32 57	33 44	34 4.5	12 33 20.6	.....	.....
	*.....	S.	35 13.5	35 39.5	36 7	36 33	12 35 53.2	-2 32.6	+16 47
	Comet....	N.	37 48	38 8	38 57	39 17.5	12 38 32.6	.....	.....
	*.....	S.	40 25	40 52	41 15	41 42	12 41 3.5	-2 30.9	+16 47
	Comet....	N.	55 47	56 5	57 0	57 19	12 56 32.8	.....	.....
	*.....	S.	58 22	.....	.....	59 34	12 58 58.0	-2 25.2	+16 51
	Comet....	N.	5 42	6 0	7 1	7 20	13 6 30.8	.....	.....
	*.....	S.	8 21	.....	.....	9 24	13 8 52.5	-2 21.7	+16 56

Mean Place of Star for 1840.0: R. A.  $16^h 40^m 18^s$ ; Declination  $+3^\circ 1' 43''$ . *Histoire Céleste Française*, p. 91: Bessel's Zone, 89.

At  $13^h 0^m$  Clock slow  $1^m 4^s.2$ , losing  $5^s.0$  daily.

The Observations made with both the Outer and Inner Rings have been employed for determining the differences of Right Ascension; but those made with the Outer Ring have not been used for the differences of Declination, when there are Observations of the same transit made with the Inner Ring.

In the computations of the Comet's relative position, allowance has been made for the Comet's motion; but the effect of refraction has not been taken into account, as it is much less than the unavoidable errors of observation.

The continuation and reduction of these Observations will be given in the next Volume.



## OBSERVED LUNAR OCCULTATIONS.

Date.	Time by Transit-Clock.	True Sidereal Time.	Object.	Phenomenon.
1839, Feb. 23	<i>h. m. s.</i> 8 50 19.8	<i>h. m. s.</i> 8 50 50.2	47 Geminorum.....	Immersion at dark limb
Mar. 21	8 37 22.3	8 37 47.1	A. S. C. 717 .....	Immersion at dark limb
Oct. 19	21 52 45.4	21 53 39.7	96 Aquarii .....	Immersion at dark limb
Nov. 17	5 31 50.2	5 32 5.5	$\delta$ Piscium.....	Immersion at dark limb

All the Occultations were observed by me with the Equatorial Telescope. The Immersion of  $\delta$  Piscium, on November 17, was observed by Mr WALLACE, with TULLEY'S 4-feet Achromatic, at 5<sup>h</sup> 31<sup>m</sup> 50<sup>s</sup>.1 by Transit Clock.

## OBSERVED ECLIPSES OF JUPITER'S SATELLITES.

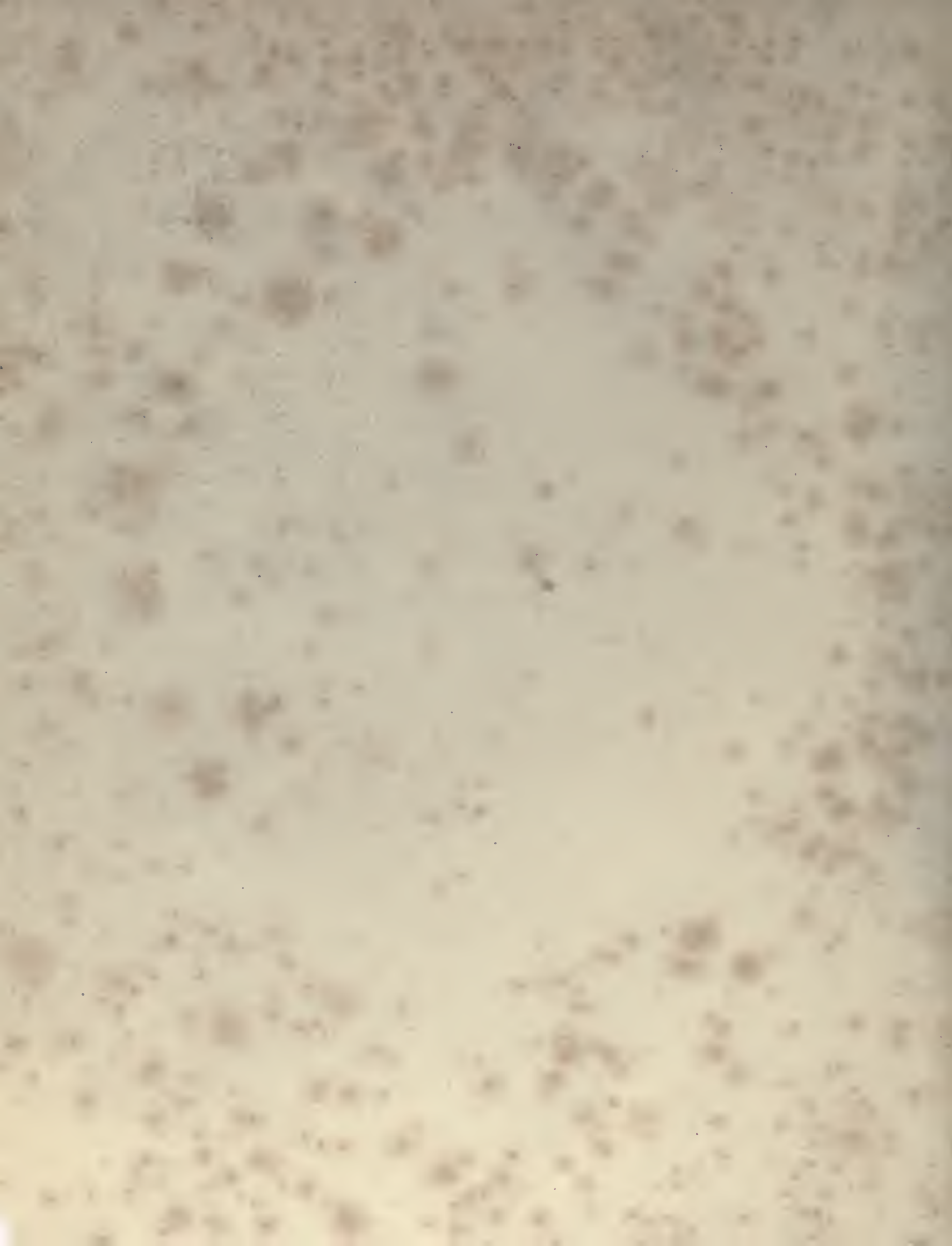
Date.	Time by Transit-Clock.	True Sidereal Time.	Satellite.	Phenomenon.	Difference from Nautical Almanac.
1839, March 18	<i>h. m. s.</i> 12 46 55.3	<i>h. m. s.</i> 12 47 14.5	I.	Immersion ( <i>a</i> )	<i>m. s.</i> - 0 26.1
23	10 54 30.0	10 54 58.6	II.	Immersion	+ 0 1.6
April 17	12 3 53.0	12 3 49.3	II.	Emersion ( <i>a</i> )	+ 0 40.6
(a) Sky hazy.					

The Eclipses were observed by me with the Equatorial Telescope, having a magnifying power of 110.











**STORAGE**

